

Rehabilitation

of the **PHYSICALLY HANDICAPPED** in

Homemaking Activities

Proceedings of a Workshop



U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Vocational Rehabilitation Administration

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Homemaking Activities

Proceedings of a Workshop
Highland Park, Illinois
January 27-30, 1963

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Vocational Rehabilitation Administration

AMERICAN HOME ECONOMICS ASSOCIATION

This training program and publication of the proceedings were supported in part by training grant No. 62-79 from the Vocational Rehabilitation Administration, U.S. Department of Health, Education and Welfare, Washington, D.C. 20201.

FOREWORD

HOMEMAKING ACTIVITIES—whether carried out by men, by women, or by children—contribute to the welfare and stability of the family and to its economic productiveness and well-being. Homemaking itself is a composite of the physical tasks, managerial functions, spirit, and emotional climate that holds the family or personality together and fosters development. Damage to this complex at any point weakens its total capacity to function. Where possible, the damage must be repaired; where this is not possible, other measures must be taken: Perhaps the environment can be changed so that the function can continue; perhaps other areas of the complex must be brought into greater prominence and use; perhaps the very depths of personality must be touched and a new role learned.

To return the millions of disabled homemakers to productive functioning in their homes and in the community is a subtle and difficult task. Those who would undertake it need to be aware of far more than mere restoration of physical skill or adjustment to physical limitations. This realization guided the Planning Committee for this workshop. How much more our professional workers need to know—how they may gain insight into the whole concept of homemaking—and how we can expand knowledge and understanding in this area were guiding questions.

The Planning Committee also realized that the time was right for the many professions involved in rehabilitation to exchange ideas, to benefit from each other's experience, and to cut channels between professions so that research, knowledge, talents, and inspiration can be shared.

Those who read these pages and study the photographs will surely be convinced, as I am, that there are many paths to rehabilitation, many ways for man to help man so that those who have suffered physical disability can still find a productive and useful place in our communities. I have placed the humane aspects first, but independence in daily activities—being able to dress oneself or prepare simple nutritious meals—play a part in life's satisfactions of the person with a handicap as well as his ability to find and hold a job. Nor should we ignore the great economic values that come from the re-

habilitation of a homemaker so that she can carry out her role in the family. Several million of the more than 36 million homemakers in the United States have disabilities that limit them in one way or another in performing their daily tasks.

This record of the proceedings of the first national interdisciplinary workshop on rehabilitation of the physically handicapped in homemaking activities, therefore, is extremely welcome. In its excellent papers and extensive bibliographies, we have a good start in putting together in one place a summary of what we know about the subject and suggesting what we need to know—and to do. Action is the Key!

Neither the Workshop nor this Report could have come into being without the concern and the initiative of the American Home Economics Association. Through the Association's interest and leadership, attention has been directed to new and creative approaches to rehabilitation in homemaking activities. Through previous workshops, committee work, journal publications, and encouragement to individual members, the Association has encouraged both research and the application of knowledge to this area of rehabilitation. We are greatly indebted to the Association's Executive Director, A. June Bricker, for the inspiration she has given the profession in directing its professional competences to rehabilitation. We are especially indebted to Dr. Bricker for her direction of the Workshop reported here. Much credit goes also to the assistant director, Neva Waggoner, and to the planning committee composed of Eleanor M. Anderson, Dr. Charles O. Bechtol, A. June Bricker, Mary C. Egan, Cecile Hillyer, Marceline Jaques, Mrs. Julia Judson, Mrs. Margaret K. Mathiott, Mrs. Elizabeth Eckhardt May, and Mrs. Waggoner. For the editing of the report we are grateful to Mary Hawkins, former editor of AHEA publications.

MARY E. SWITZER,
*Commissioner, Vocational Rehabilitation Administration,
U.S. Department of Health, Education, and Welfare*

CONTENTS

	Page
FOREWORD	iii
THE WORKSHOP	
Welcome. FLORENCE W. LOW -----	1
Greetings. MARY E. SWITZER -----	2
Plan and Purpose. A. JUNE BRICKER -----	3
Section I. REHABILITATION—SIGNIFICANCE AND SCOPE	
Significance and Scope. A. RYRIE KOCH -----	7
The Place of Management in Rehabilitation. LILLIAN M. GILBRETH -----	14
Section II. PROGRAMS IN ACTION	
Representative Programs in Institutions. FLORENCE M. STATTEL, OTR -----	19
Representative Programs in Patients' Homes. INEZ JENSON, OTR -----	27
Representative Programs in Communities. EVELYN LYMAN -----	31
Section III. AVAILABLE RESOURCE MATERIALS	
Nutrition and the Handicapped Homemaker. JOAN S. WHITE -----	37
Children of the Handicapped Mother. JESSIE WALL -----	45
Clothing for the Physically Handicapped. ELIZABETH M. WAGNER -----	57
Clothing for the Disabled. MURIEL E. ZIMMERMAN, OTR -----	69
Home Management Resource Material and Needs. RUTH C. KETTUNEN -----	74
Discussion Guide of Resource Materials on Housing for the Disabled. JULIA JUDSON -----	83
Some Resource Material in the Area of Family Relations. RUTH H. JEWSON -----	87
Section IV. TRAINING PROFESSIONAL PERSONNEL	
In Home Economics. VIRGINIA Y. TROTTER -----	103
In Medicine. CHARLES O. BECHTOL, M.D. -----	113
In Nursing. LENA PLAISTED -----	116
In Occupational Therapy. MARTHA E. MATTHEWS, OTR -----	126

Education for Physical Therapy. SARAH S. ROGERS---	129
The Role of Rehabilitation Counseling. DOROTHY CANTRELL -----	134
In Social Work. MARGARET M. RYAN -----	139
<i>Section V. CURRENT RESEARCH AND DEMONSTRATIONS, RECOMMENDATIONS FOR THE FUTURE</i>	
A Review of Some Sociological and Psychological Research Related to Disability and the Home. VICTOR A. CHRISTOPHERSON -----	145
Development of the Applied Sciences to the Handicapped Homemaker. EDWARD E. GORDON, M.D.-----	159
A Report on Research and Demonstration Projects from the Field of Home Economics Relating to Rehabilitation in the Area of Homemaking, with Recommendations for Further Study. ELIZABETH ECK- HARDT MAY -----	173
<i>Section VI. WHERE DO WE GO FROM HERE?</i>	
In Professional Training. Summary of General Recommendations from Work Groups. MARJORIE BALL, OTR -----	207
The Vocational Rehabilitation Administration Responds to the Workshop. CECILE HILLYER -----	212

Appendix

BIBLIOGRAPHIES	
Child Development -----	216
Clothing -----	218
Family Relations -----	219
Home Management -----	222
Housing -----	224
Nutrition -----	226
FILMS, FILMSTRIPS, SLIDES -----	228
ADDRESSES FOR MATERIAL IN REFERENCE LISTS AND BIBLIOGRAPHIES -----	
WORKSHOP PARTICIPANTS -----	230

THE WORKSHOP



A WHEEL CHAIR APRON SIMPLIFIES HOUSEWORK

U.S. Department of Agriculture Photo

WELCOME

FLORENCE W. LOW

President, American Home Economics Association

I AM DELIGHTED to welcome all of you to this workshop. I hope that our few days together will be productive ones and that they will mark a milestone in rehabilitation efforts as well as the beginning of a long and fruitful co-operation in the future.

Fifty years ago, the American Home Economics Association came into being. The profession was formed largely because of the efforts of Mrs. Ellen H. Richards and others to put science to work to solve the problems of the home and its physical environment. Those pioneers were dealing with an era when many even so-called healthy people were suffering from vague ailments, from the effects of lack of understanding of sanitary principles, from ignorance about nutrition, from poor environmental conditions of many sorts.

In the last fifty years, home economists have played a determined and—I believe—a very successful role in doing away with much of this ignorance and apathy and in establishing sound principles of nutrition, of home management, of sanitary practices in the home and in group living. The other professions represented here—medicine, nursing, occupational therapy, dietetics, social work, physical therapy, education, and our government agencies—have been traveling similar roads. You, too, in your fields of work, have accomplished real miracles for the health and well-being of our population in general.

Now—in this country—we have achieved an excellent base of general health, nutrition, sanitation, and well-being. We can now turn our attention to some of the specific problems facing large groups of our people, such as rehabilitation.

The professions represented at this workshop have come by their various paths to the problem of rehabilitation for the physically handicapped in homemaking activities. This is a problem of the total person—the total family—the total community. Our presence here means that we recognize that this *is* the context in which we must work and work together.

The American Home Economics Association is proud to be one

of the sponsors of this Workshop, to offer our best services here, and to join with the other professions in improving and expanding the training of professional people who work with individuals and families in the rehabilitating of the physically handicapped. We hope that our joint efforts will contribute to restoring confidence, hope, and abilities to thousands of our fellow citizens.

We are glad you are here.

GREETINGS

MARY E. SWITZER, Commissioner of
Vocational Rehabilitation
Department of Health, Education, and Welfare
Washington, D.C.

EVEN THOUGH I cannot be with you on this significant occasion of the first national, interdisciplinary workshop on rehabilitation for homemaking activities, it gives me great pleasure to know that so distinguished a group is meeting tonight to start three days of hard work on a problem that is not only widespread but also one of deepest significance to disabled men, women, and children.

It is indeed heartwarming to realize that you who come representing the biological and social sciences and many different professional fields can leave your own special jobs and can sit down together to pool your knowledge in a common task and toward a common goal.

The warmest greetings to you all on behalf of the Vocational Rehabilitation Administration.

PLAN AND PURPOSE OF THE WORKSHOP

A. JUNE BRICKER

Executive Director

American Home Economics Association

IT WAS NO ACCIDENT that the Vocational Rehabilitation Administration came to the American Home Economics Association with a request to conduct a workshop on the rehabilitation of the physically handicapped in homemaking activities. Our Association has been concerned with the rehabilitation of the handicapped homemaker for some years. As might be expected, certain of our members have become quite involved in rehabilitation of the handicapped homemaker. I want to say immediately that it is our good friend and honorary member, Lillian Gilbreth, to whom we are indebted for much of our inspiration and the encouragement to relate the management competences of the home economist to rehabilitation of the physically handicapped. We are so happy that she is with us at this Workshop. It would be difficult to imagine AHEA having this Workshop without her.

The participants gathered for this meeting are from a diversity of health-related disciplines and from a wide geographic area. Many of us are meeting each other for the first time, and many are probably wondering when and how the AHEA developed its interest and concern for rehabilitation. I would like to take this opportunity to acquaint all of us with some of the major steps that led to this occasion.

Early in 1955, the AHEA was officially represented at a workshop on the "Team Approach to the Rehabilitation of Handicapped Homemakers," held at the School of Home Economics, University of Connecticut. Our representatives reported on this experience at another workshop held in June by the health and welfare section of the AHEA on "Job Evaluation of the Home Economist Employed in Health and Welfare Agencies." There was discussion of future opportunities and responsibilities in rehabilitation that home economists working in health and welfare might have.

From this beginning, members—participating either as consultants or students—represented the Association in workshops or con-

ferences on how the home economist works as a member of the team in rehabilitation of the physically handicapped in homemaking activities.

In 1956, a committee on rehabilitation was formed in the health and welfare section of AHEA. Subsequently, it became a joint committee of AHEA and the American Dietetic Association.

Interest increased as the nucleus of enthusiastic members appeared on programs, wrote articles, and talked with other members. Rehabilitation continued to find its place on the programs of state and national annual meetings of both the AHEA and the ADA.

The joint committee worked on, and, in 1960 in Denver, preceding the annual meeting of AHEA, it sponsored a workshop on "Expanding the Services of the Home Economist in Rehabilitation." This workshop was held in cooperation with the college of Home Economics of the Colorado State University and the Denver Regional Office of the Vocational Rehabilitation Administration. The results produced more widespread interest within the membership for the potential service of the profession in rehabilitation.

Again limiting my remarks to the interest and programs of the American Home Economics Association, we were officially represented at the International Conference on Homemaker Rehabilitation (a part of the Conference on the Physically Disabled and Their Environment, held in Stockholm in October 1961). We are also represented on the President's Committee on Employment of the Physically Handicapped. At the meeting of this Committee in May 1962, our representative directed attention to the economic and social significance of homemaker rehabilitation.

Because of our continued and expanding interest in rehabilitation, we have included rehabilitation of the handicapped as an area of study for our 1963-64 home economics research fellowships.

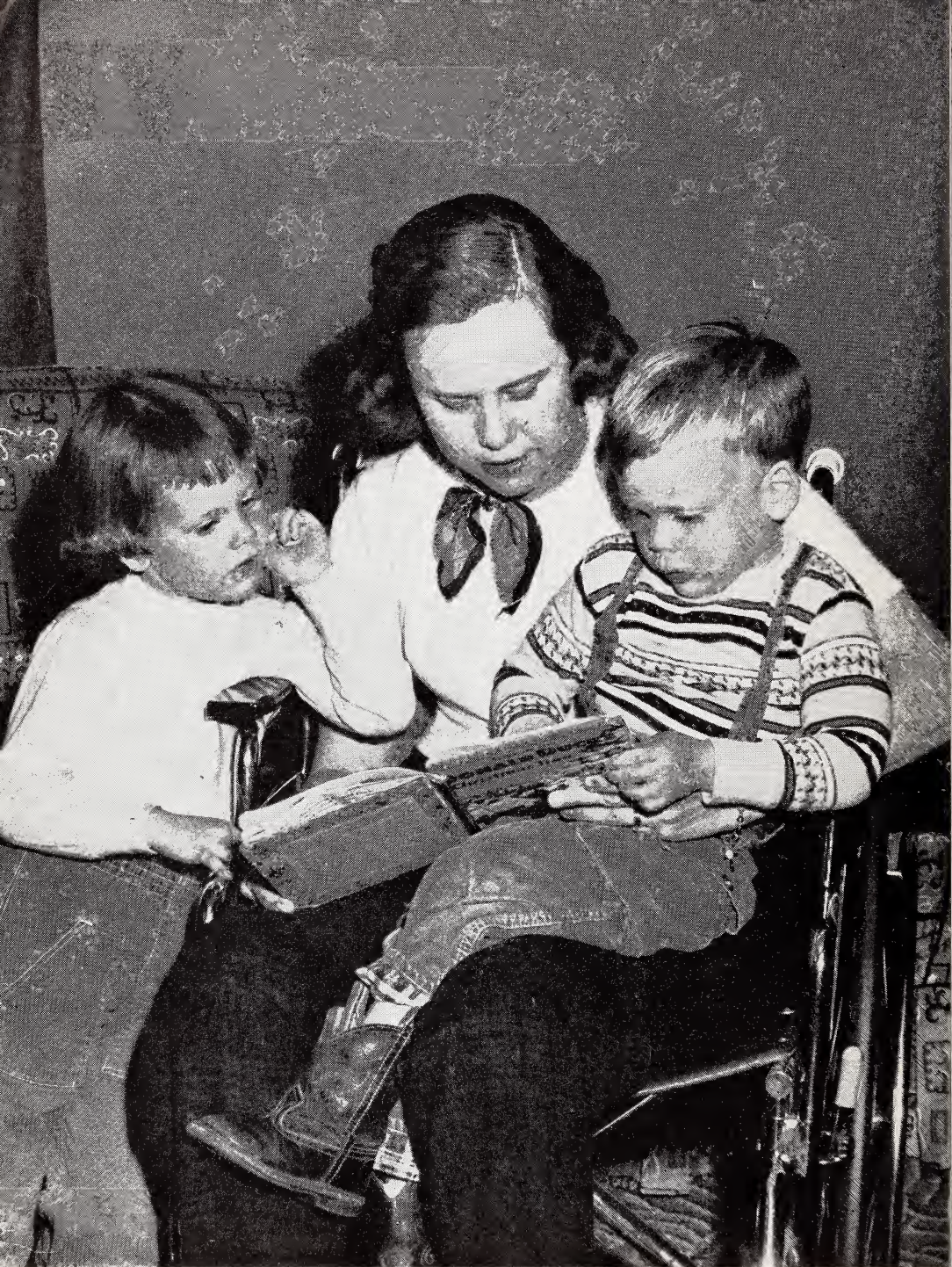
And so it was with pride and pleasure that we accepted the request made by the VRA to conduct this Workshop, the purposes of which are:

To identify needs.

To develop a comprehensive nationwide program for training key personnel concerned with the rehabilitation of the physically handicapped in homemaking activities.

Months have been spent in planning this workshop. The planning committee made up of representatives from most of the disciplines represented here worked hard and conscientiously. I want to say a special word of appreciation to Cecile Hillyer for her wisdom and counsel and to Mrs. Neva Waggoner, assistant director of this workshop, for her tireless assistance in the production of the conference. I refer specifically to the excellent exhibits and library. Last, but not least, a word of appreciation is due each of you who

has accepted assignments to make this the working conference which we promised it would be in our letters of invitation. In our deliberations, may we keep ever before us our reasons for being here, and work to answer the questions formulated by the VRA as they have been reworded into the statements of the purposes of this workshop.



WORK SIMPLIFICATION MEANS MORE TIME FOR STORY TELLING

SECTION I

REHABILITATION—SIGNIFICANCE AND SCOPE

For nearly 10 million homemakers, rehabilitation means an opportunity to return to a productive place in their homes and in society and to as independent and satisfying a life as possible.

This publication is about this opportunity, about the interested professional personnel who stand ready to help, and about the agencies that we, the citizens, appoint to assure that these two groups do find each other.

SIGNIFICANCE AND SCOPE OF REHABILITATION IN HOMEMAKING ACTIVITIES

A. RYRIE KOCH

New England Representative

Vocational Rehabilitation Administration

Boston

WE MAY BE theoretical or practicing specialists in handicapped homemaker rehabilitation, but only by knowing homemakers who are handicapped by disability can we realize the fears, the heartbreak, the hopes, the doubts, the beliefs, and the happiness that can be the lot of those who suddenly find themselves handicapped homemakers and then have to take that long road back.

Several years ago I moderated a panel on which the stellar attraction was someone who had been a disabled homemaker for over 16 years. She was a delightful girl whose courage, ability, charm and dignity made me almost forget that she was handicapped. Let me tell you something about her dramatic and moving experience. Two months before her husband was to return home after three years in World War II, she was stricken with polio. This was in September 1945. They had a son three and one-half years old. This

bewildered young mother was rushed to a local general hospital. It was soon learned that she was paralyzed from the neck down. Although she could still move her hands somewhat, she was completely helpless. A physical therapist came to her room each day, massaged her legs and arms, and her condition slowly improved; however, she was not able to sit up, or feed herself, and after five months she was discharged from the hospital. A dismayed, young returning soldier, a three-year-old child and this paralyzed young woman moved into the home of her mother.

A physical therapist came each day to give treatment, and with the courage and devotion of the family, the patient made progress to the extent that she could sit up in bed and even in a chair for an hour a day. She learned to feed herself in a reclining position. Housekeepers came and went almost as fast as the weeks went by. By midsummer of the following year she was able to sit up part of the day and propel herself around the house in an old cumbersome wheelchair which had been loaned by the city. The physical therapist, her family physician and her family decided that she needed braces, more training and good evaluation of her progress, but since there were no rehabilitation facilities in this area of the State of Maine for an adult, she was sent back to the local general hospital where she was fitted with leg braces and given a new portable wheelchair. During the next six months she learned to stand with the braces and from the wheelchair managed to do many of the household chores—ironing, washing dishes, preparing meals and looking after her son during the hours that her husband was away from home.

A year and a half later our patient realized that she was not going to recover the use of her legs, that she would be confined to a wheelchair. At this point she and her husband decided to build their own home, which would all be on one floor, so that she could manage more of her housework. Fortunately she had an uncle who was a building contractor. He helped with the blueprints and showed her husband how to build forms for the cement foundation. Men who worked with her husband helped to pour the cement and the uncle framed the house. It took three years to complete this little home. Her physical restoration had reached a standstill and this young couple were under heavy financial obligation. At her request the local office of the State vocational rehabilitation agency purchased for her an electric sewing machine and she was able to build up a lively sewing business. She developed a telephone answering service for an airline company. This is the way they lived for the next six years. Much to her embarrassment her weight reached 200 pounds; she had to be lifted by her husband into the car, the bed, the chair, wherever she went.

To bring this story to a conclusion, this young woman was visited by a district public health nurse who had trained in rehabilitation at the Institute of Physical Medicine and Rehabilitation in New York. Through the financial assistance of the State vocational rehabilitation agency and other organizations she was admitted to that Institute. Five weeks after admittance she had learned to transfer to almost any level so that she could move from bed to chair, car, shower or any other place. She started a very rigid diet along with a rugged schedule of therapy which included mat work, weight lifting, underwater exercises and training in activities of daily living. She was discharged from the Institute and returned home, following her diet and exercises faithfully. In six months she had lost 45 pounds. On a return trip to the Institute she was fitted with full braces and given more intensive exercises to build up the muscles.

Following the second discharge from the Institute she spent the summer at home walking several hours each day. Debts, living costs, medical care added up now to a monthly amount far in excess of her husband's income. She simply had to earn too. After eight months of answering ads and taking aptitude tests, this patient was hired as a receptionist also doing switchboard and general office work. To the best of my knowledge she is still employed in this position today and doing her housework at home without any outside assistance.

In telling you about this courageous girl's particular situation I haven't mentioned the strains that developed between husband and wife, the perplexity and hostility of the child in his relationship to his mother, or the periods of discouragement when she was almost ready to give up and be an invalid. Her situation brings so forcefully to mind a paragraph in the pamphlet "Doing Something for the Disabled,"¹ written by Mary Switzer and Dr. Howard Rusk. In it is the statement that, if we examine the causes of broken homes and the disintegration of healthy family life, disablement of the wife and mother will appear high on the list; that handicapping conditions are as prevalent, as serious and as costly among women as among men, but that far too little attention has been given to the rehabilitation needs of women; that the disability of a wife and mother can destroy a home, cast children adrift, exhaust the husband's earnings and produce public costs which are so large and so prolonged as to be almost immeasurable.

In the early part of this century, Dr. Richard Cabot, a professor of medicine at Harvard University, named four things that people live by—work, play, love and worship. Dr. Cabot said that physical

¹ Public Affairs Pamphlet No. 197, Public Affairs Committee, New York, in cooperation with the National Rehabilitation Association, 1953.

defect may impair one's ability to enter into one or all of these but there is no physical disability that can destroy our ability to do any one of them. There is no one so physically disabled that he cannot do some kind of work, play in some fashion, invest love in someone, and find some way to worship. As long as we are human, we can enjoy these activities no matter how disabled our bodies may be. In this connection we need to think of something that Dr. Karl A. Menninger said and that is: Bear in mind that the adult patient who has suffered sudden disablement has two kinds of adjustment to make in life. First, he must adjust himself to the realistic limitations and adaptations imposed by the disability; second, he is suddenly called upon to modify his body image, his conception of himself, his relations to people, his work, in accordance with the nature and extent of disablement. This psychological adjustment may have implications for the patient that are far more crippling to his total functioning as a person than the physical disability itself.

If the deliberations of this workshop develop curriculum that will help today's students to be able tomorrow to restore only a few women like the disabled homemaker I described earlier, this meeting will be exceedingly worth while. But there are not just a few. There are at least 36 million women keeping house today and it is astonishing that 22 million of these have one or more chronic disability conditions. Six million have chronic disabilities that in some way or other limit their activity and between $3\frac{1}{2}$ and 4 million are so limited by their disability that it affects their functioning as homemakers.

If you study the pamphlets called "Health Statistics" which report information obtained through the U.S. National Health Survey,² you will learn that the major causes of chronic disability among these 36 million women keeping house are defects of vision, hearing loss, paralysis, circulatory conditions, arthritis and rheumatism. Also, many people don't know that 45 per cent of all injuries occur *in the home*, whereas the proportion of injuries that occur to people *at their jobs* is only 19 percent. Homemakers have an accident rate 123 per cent higher than that of employed men, and the major impairments caused by injury to homemakers are impairments to the back and spine, the feet and the legs, and injuries that result in the loss of fingers or toes.

DEFINITION OF REHABILITATION

I am sure it isn't necessary for me to preface anything I say by a statement that I am not an educator. I have no formal experience in teaching. What I shall say is derived from rehabilitation prac-

² Published by the Public Health Service of the U.S. Department of Health, Education, and Welfare.

tice, as one who has worked in a vocational rehabilitation program and over the years has developed ideas and cautions, goals and ideas about competence and standards of effective performance.

There are almost as many definitions of rehabilitation as there are letters in the word, but let me give you only three. Mary Switzer said,

Rehabilitation is whatever is necessary to get handicapped people from where they are to where they ought to be in view of their potential.

Scott Allan, who is assistant vice-president of the Liberty Mutual Insurance Company, said,

Rehabilitation is making a person aware of his potential and then providing him with the means of attaining that potential.³

There is another definition that I like and I think can be useful in this workshop. It has been used by the International Society for Rehabilitation of the Disabled.

Rehabilitation is making it possible for physically handicapped men, women and children, wherever they may live, to remove or reduce their impairment and lack of opportunity with the help of medical, social, educational and vocational services so that they can partake of a life that offers as many privileges and responsibilities as humanly possible.⁴

VRA AND TRAINING PROGRAMS

Any one of those definitions really explains the mission of the Vocational Rehabilitation Administration (VRA) because its responsibility is to see that each year as many handicapped adults as possible are vocationally rehabilitated. As most of you know, I am sure, last year for the first time the State vocational rehabilitation agencies in this country rehabilitated, vocationally, more than 100,000 handicapped persons, and about 10 per cent, or 10,000, were disabled homemakers.

Through our Research and Demonstration Grant Program—the projects supported in part by VRA funds—more than 4,000 additional persons were vocationally rehabilitated. If our mission is to rehabilitate, vocationally, as many handicapped persons as we possibly can, then we must make the broadest use of our authority under the law and the most efficient expenditure of the funds that Congress has provided to us. It is for this reason that we are depending so much on instilling the concept of rehabilitation in the teaching curricula of the many professions concerned with treating chronic disability. That is why for this current year the VRA has made more than 300 training grants to universities in rehabilitation counseling, medicine, nursing, occupational therapy, physical therapy, prosthetics, psychology, social work, speech pathology and audiology, and other fields.

³ From *Rehabilitation—A Community Challenge*.

⁴ Donald Wilson, Secretary General of the Society.

If my understanding is correct, the immediate purpose of this workshop is to bring together knowledgeable people from the field of home economics and from the medical and medically related fields—all those fields that I have just mentioned—to advise the VRA on how training activities should be planned and programmed so that handicapped homemakers can be better equipped to deal with the difficulties they encounter in carrying out their homemaking responsibilities. It is my further understanding that because of the special and unique problems and needs of blind, deaf and mentally retarded persons, this Institute is focusing only on training personnel to meet the needs of persons with neurological and orthopedic disabilities. Attention also will be given to the organized programs of training in selected professional fields from the standpoint of (1) what is available through continuing education programs for personnel in practice, and (2) the content available in basic professional training and ways that the content can be strengthened.

When our State vocational rehabilitation agencies throughout the 50 States consider an applicant for their services, they must determine as the condition of eligibility that the applicant has a physical or mental disability and that the resulting functional limitations or limitations in activities constitute a substantial handicap to employment. Moreover, the agency must find in the diagnosis and evaluation of this client's condition that there is a reasonable expectation that vocational rehabilitation services may render that individual fit to engage in a remunerative occupation. Quite frankly I hope in your discussions in the next few days that time will not be spent in discussing the failure of some State agencies to serve homemakers or the tendency of some State agencies to claim a rehabilitation as a homemaker when rehabilitation services have failed in this objective. These are the weaknesses in some State agencies' administration that we know are gradually being eliminated. In that statement of eligibility, I hope you will not be exercised by that word "remunerative"—that to accept an individual, there must be a reasonable expectation that vocational rehabilitation services may render the individual fit to engage in a remunerative occupation. Our lawyers many years ago ruled that a "homemaker" is in a remunerative occupation even though she does not receive payment for her services.

PROGRAM SHARED BY OTHERS

I want to come back to what I think is our mission in this program, and that is to rehabilitate as many persons, including homemakers, handicapped by disability, as we possibly can. I know that Dean Elizabeth May and others among you on many occasions have pointed out that the scope of rehabilitation in homemaking activities

is not limited to handicapped wives and mothers. For example, all that we learn in homemaking rehabilitation can also be applied to *older people*. Many men and women with diminishing energy might continue to live independently for many years if they could only be persuaded to simplify their housekeeping. There is also a large group of men and women with chronic diseases who may *live alone* or with relatives. If, during their hospitalization, they could be encouraged to become reasonably self-sufficient in activities of daily living and in simple household tasks, they would be in less danger of being rejected and might still be able to live useful lives outside of institutional walls. Dean May has emphasized particularly that in setting up facilities for homemaking activities consideration should be given to the possibility of including *boys and girls* in the program, that homemaking activities can form an exciting part of a program for convalescent children. The development of homemaking skills may contribute greatly to development of their self-confidence and initiative, and to their ability to care for themselves. Even though it may do damage to the male ego, I think we must remember that when a *husband's disability* makes it difficult or impossible for him to be employed outside the home, it may be necessary to train him to become the homemaker so that his wife may be the breadwinner. The shifting of what is ordinarily considered woman's work and man's work may add to the complications of rehabilitating the patient, but this may be the only solution.

I suppose you might say that the end product that we all hope for from this workshop is identification of gaps and deficiencies in teaching materials and in instructional methods, followed by recommendations for a program of action that possibly the VRA can help implement in co-operation with universities and the professional associations. I know that long strides have been made towards that end product by the very fine work that has been done by Neva R. Waggoner and Elizabeth May at the University of Connecticut, by Virginia Trotter and Julia Judson at the University of Vermont, in such films as "Where There's a Will" and "Wheelchair Kitchen,"⁵ and through so many efforts and media in other parts of the country by so many of you that I haven't had an opportunity to learn about.

Let me assure you that Mary Switzer, Commissioner of Vocational Rehabilitation, is exceedingly interested in your efforts at this Institute. Her message makes that clear. I know that I can assure you of her interest in supporting the recommendations for a program of action that may result from this workshop. As one of the nine regional representatives of the Vocational Rehabilitation Administration in the country, let me speak for all the regional representatives by saying that in each representative's geographical

⁵ Produced at University of Connecticut and University of Illinois, respectively.

area he will be most willing to give any of you his assistance in terms of program development in the universities and in developing your relationships with the State vocational rehabilitation agencies.

THE PLACE OF MANAGEMENT IN REHABILITATION

LILLIAN M. GILBRETH
Consultant, Industrial Management
New York

WHEN MANAGEMENT STATES a problem and sets out to evaluate all resources necessary for solving it, it always starts with a definition of terms. Let us also begin by defining management itself: By management we mean "getting work done through one's own efforts or those of other people."

We assume that work is desirable and that the will to work is essential if management problems are to be identified and the resources for solving them evaluated. It takes time to evaluate available resources before utilizing them, but the time is well spent.

I shall try to present for your consideration some of the techniques of evaluation that management has to offer. I hope that you will be willing to consider and test them out in order that we may select and utilize those which will be most valuable for rehabilitation.

Happily, in these days rehabilitation has come to mean something more than bringing a person back to his or her former state of competence. Today we find that a person who has been rehabilitated with the help of every person and every activity available will have learned in the process to develop easier, better, and more interesting work methods than those he used before the condition developed which made rehabilitation necessary.

Management has many things to offer. As we consider them together I shall put much of my material in the form of questions, in the hope that your creative response may go far toward solving the problems which concern us here. First, management has to offer what it believes to be both a science and an art. Do you feel that this viewpoint would be interesting and valuable in connection with rehabilitation? In the second place, management has a history and a code. The history goes back now many years—it started in this country with a group of mechanical engineers who were interested in getting work done effectively. The code is a simple one but seems to us adequate. It consists of "utilizing the resources of nature and

of human nature for the benefit of mankind." Is this a code which is applicable in the rehabilitation field?

Management has also a method to offer. It is the questioning method and the questions used are the simple ones which Kipling puts into his well-known quatrain "The Serving Men"

"I keep six honest serving-men
(They taught me all I knew);
Their names are What and Why and When
And How and Where and Who."

As we review the history of management, we find that various groups at various times have focused attention on one or another of these "serving men" because it seemed, under the circumstances, to have most to contribute to the problem in hand. For instance, in the beginning, industry placed the emphasis on *What* is to be done. Today, of course, we continue to feel that it is necessary to determine the *What* before one proceeds with changes, or for that matter, maintenance. Later, industry focused its attention on the *Where* and *When* and after that on the *Who* and *How*. Finally it concentrated, as we do today, on *Why* the work is done and why the method used is used. Do you feel that this questioning method would be useful in the rehabilitation work? And in what sequence should the questions be asked? Once this has been determined, it should be possible to turn to the question of resources.

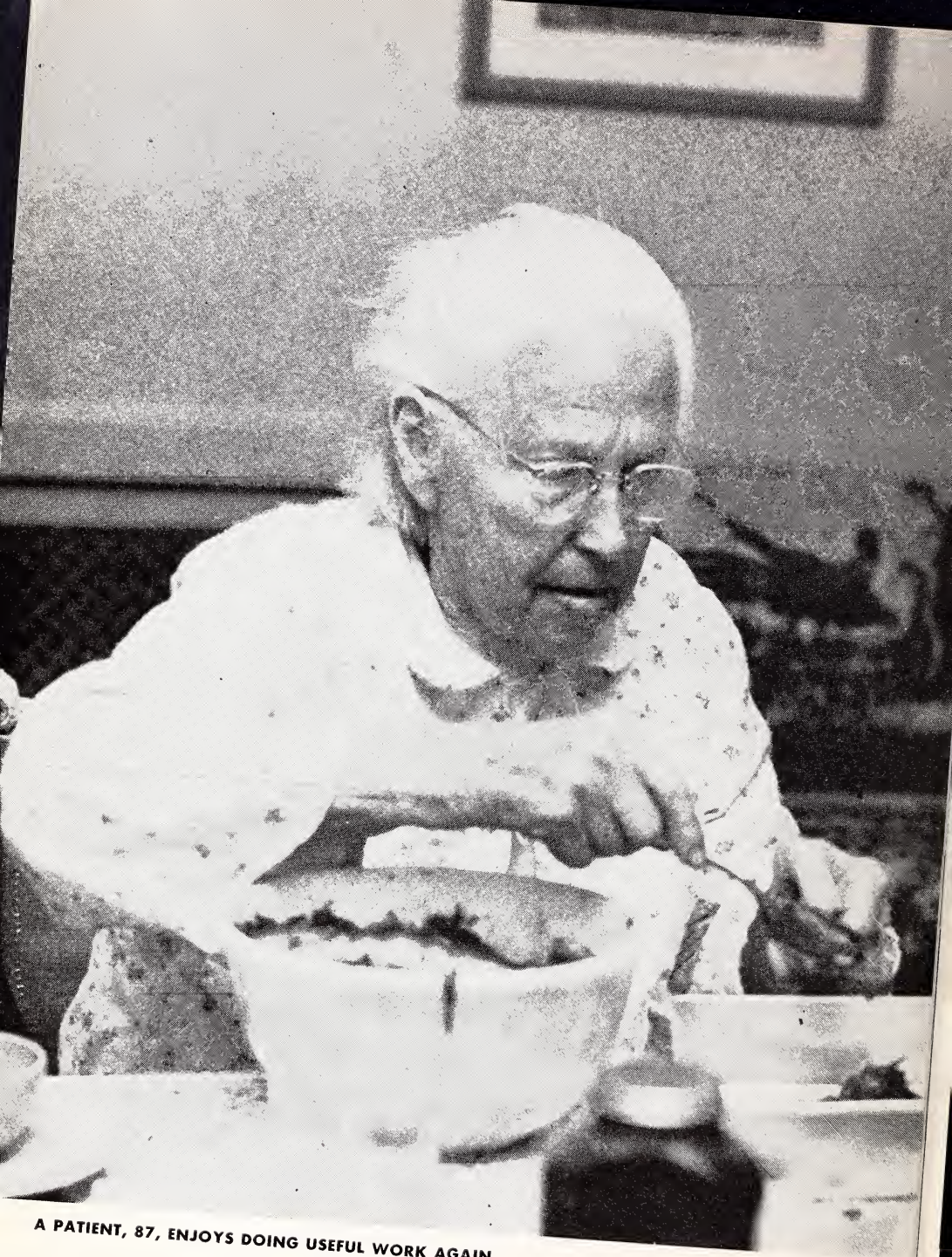
The first resource is the will to work—to everybody concerned this seems to be increasingly important. The second resource, the organizations which carry through the projects in hand, starting perhaps with small groups, expanding to local organizations, then expanding further to area, to national, and to international scope. Management has found that its organizations have not only brought new and stimulating material to many countries but have enabled these countries to make their own contributions in return. Have we the same feeling toward the growth of organizations in the rehabilitation field? What can we get or give in an exchange of information between various groups?

Management has increasingly looked for, found, and utilized resources. It started with the mechanical engineers, but it has enlisted the attention of all types of engineers. It started with business and industry, but it has expanded to offer help increasingly to non-profitmaking institutions. Harold Maynard, editor of the *Industrial Engineering Handbook*. (McGraw-Hill, 1956) included in his first edition a chapter on the non-commercial applications of industrial engineering techniques. The new edition, now in preparation, will include a larger amount of material and show how the work has expanded, not only in the number and the type of insti-

tutions mentioned in the first edition, but also into other new and stimulating fields.

Management has found that the full use of its resources leads directly into interdisciplinary conferences. It is most encouraging to find that there has not only been an increase in the number of participants representing both the exact sciences and the human sciences, but that each group has much to contribute to the solution of their common problems. Each has problems of its own for which it is seeking solutions, and each finds the experience of others can be serviceable. Undoubtedly for years, and probably for centuries, there have been conferences of people representing different approaches to work activities but the definite setting up of planned channels of communication is a comparatively new idea which has proved its usefulness and is constantly expanding.

These findings in the management field would seem to me worthy of consideration by the rehabilitation group, to which I am proud to belong. It is only when we get together in meetings like this one that it is possible for us, as a group, to go through the careful procedure of questioning the usefulness of our resources and evaluating the material. Then we can set up plans for the further development and strengthening of our organizations and resolve to give to, to get from, and to share what they have to offer in the rehabilitation field.



A PATIENT, 87, ENJOYS DOING USEFUL WORK AGAIN

Orange County General Hospital (California) Photo

SECTION II

PROGRAMS IN ACTION—IN INSTITUTIONS

—IN HOMES

—IN COMMUNITIES

REPRESENTATIVE PROGRAMS IN INSTITUTIONS

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Consultant on Rehabilitation Centers

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BEFORE LAUNCHING into programs in institutions, let us arrive at a common understanding of the meaning of the title of this workshop.

Simply, it means that physically and emotionally handicapped people *can adapt* themselves to their environment so that they *can do* homemaking activities and home management.

We cannot help a man or a woman who does not wish to be helped. Motivation is individually determined, and the handicapped person has a self-starter that only he controls. Emotion is the glue that holds the personality together; therefore we cannot ignore emotion when speaking of a person with a physical handicap. An understanding of the handicapped person's emotional reaction to his disability is extremely important. A person who *cannot accept* his altered body image cannot accept his disability. There is the person who accepts his disability and uses it to advantage as an emotional crutch. The degree of patients' acceptance of the rehabilitation process, or the emotional willingness *to do*, is the key to successful rehabilitation. Acceptance falls between the two extremes indicated above.

The physical ability to accomplish an activity is closely associated with the psychological acceptance of the disability. The motor must be started before it can run. It runs on the fuel of faith

¹ Because Miss Stattel was unable to attend the Workshop, Frances Helmig, OTR, Chief Occupational Therapist, Institute of Physical Medicine and Rehabilitation, read this paper and participated in the discussion on programs in action.

and satisfactory achievement. Therefore, what the person is physically able to do is important and provides evidence of progress which pushes the patient toward reality and acceptance of his disability.

The handicapped person's world in an institution is structured and does not have the environmental barriers that are found in the home. The emotional climate of the family is absent. This climate must be felt and understood and gradual changes in attitudes of patient and family be initiated so that the patient can function at home.

In capsule, then, we are concerned with:

1. Motivation—the handicapped person's willingness *to do*.
2. Physical restoration—the handicapped person's physical ability *to do*.
3. Environmental modifications—the essential adaptations: physical, psychological, and social, in order to achieve functioning in homemaking activities in the home.

Handicapped individuals with disabling conditions were first treated by the family in the home, then by the physician in the home, and later in charitable hospitals for a terminal period. The institutional or terminal hospital changed in character with the conscious acceptance of hospitals as necessary institutions in our society. With advances in medicine, the hospital has become an institution where patients receive medical and surgical care, lives are saved and pain is relieved, and eventually patients are sent home.

In 1960, hospitals evinced a greater interest in patients by developing broader and long-range programs. "Planned medical management" and "total patient care" were phrases frequently heard. Total patient care includes a concern for how the patient functions when he leaves the hospital and how he can be helped to develop function, maintain function, and make use of his remaining capabilities so that he can live and work in society today. Early work with patients in institutions is a trend.

Disabled persons are found in different kinds of institutions and stay in them for varying periods of time. The general types of such institutions are:

1. General hospitals.
2. Specialty hospitals.
3. Convalescent homes.
4. Nursing homes.
5. Rehabilitation centers.

Some of these institutions have programs concerned with the development of techniques of homemaking.

In these institutions, certain professional staff members are concerned with the patient's activities at the time when *all* of his energy

is not spent in the acute phase of illness, whether his disability is physical or mental. It is natural that the staff members at this time concern themselves with assessing the patient's functional ability so that he can prepare for returning home. It is important to assess the activities he will be able to carry on after he leaves the institution. In this logical chain of events, it is also natural that some of these points of concern deal with homemaking.

The following chart outlines the total care approach of rehabilitation and the staff involved in the rehabilitation process.

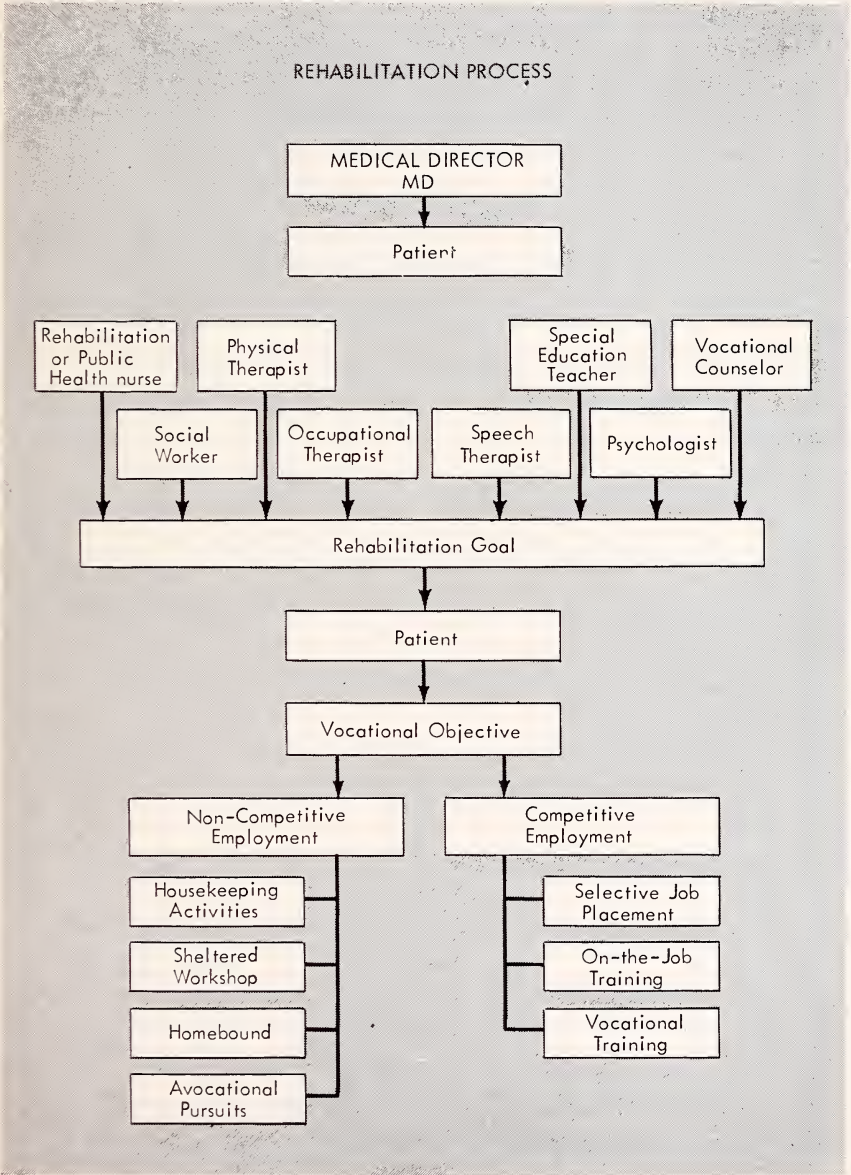


Figure 1

Composite of Questionnaires

The Planning Committee of this Workshop sent questionnaires to a selected list of people who were responsible for homemaking activities training in hospitals, rehabilitation centers, patients' homes, and other areas. Report forms, indicating hospital-located rehabilitation programs and rehabilitation center programs, were forwarded to the speaker for suggested use as background information. The material was summarized to present information on services offered and personnel carrying out this service in hospitals and rehabilitation centers.

Thirty-two reports were received—15 hospital-located programs and 17 rehabilitation center programs in homemaking activities.

The following information was selected from these reports:

Hospitals

<i>Title of Director</i>	<i>Teaching Method</i>	<i>Type of Hospital</i>
1 Director, Patient Services MSW----	Group -----	Tuberculosis.
1 Dietitian -----	--do-----	General Hospital.
3 Home Economists -----	--do-----	Children.
2 Rehabilitation Counselors -----	--do-----	Tuberculosis.
8 Occupational Therapists -----	Individual -----	General Hospital.
15 Total		

Approximately 65 per cent of hospital programs were tax-supported. All patients were referred by physicians.

In reply to the question—What other professional persons are included in the program for rehabilitation in homemaking activities? replies indicated:

- 3 Home Economists
- 7 Dietitians
- 2 Nutritionists
-
- 12 Total

Rehabilitation Centers

<i>Title of Director</i>	<i>Teaching Method</i>	<i>Type of Center</i>
1 VNA Nurse -----	Group -----	Free Standing
16 Occupational Therapists -----	Individual -----	University Connected
17 Total -----		State Operated

Approximately 65 per cent of the rehabilitation centers were privately supported. All patients were referred by physicians.

In reply to the question—What other professional persons are in-

cluded in the program for rehabilitation in homemaking activities?
—replies indicated:

- | | |
|-------|----------------|
| 1 | Home Economist |
| 4 | Dietitians |
| 2 | Nutritionists |
| <hr/> | |
| 7 | Total |

In hospital-located rehabilitation services and rehabilitation centers, it was found that homemaking services were the responsibility of the occupational therapist in 24 of 32 institutions reporting. Of the five other disciplines assuming responsibility for eight homemaking activities programs, three were home economists. It is noted that the five disciplines using the group method of teaching were located mainly in children's hospitals and tuberculosis hospitals which had tax support. In hospital-located programs, home economists, dietitians, and nutritionists were included in the program in 12 instances—in rehabilitation centers, in 7 instances. The occupational therapist, in all 32 instances, used individual teaching methods.

The total care approach of rehabilitation is concerned with the handicapped patients' functioning as productive persons. Early and continued proper medical management is important to all patients. Chronic diseases account for 88 per cent of disabilities; five per cent are caused by accidents at work; five per cent home and highway accidents; and two per cent by congenital conditions. Of the 28 million people who have some disability, our concern is with the 17 million persons who are limited in their activities at work and the five million who are confined to their homes with disabilities that prevent them from moving freely or without assistance. In these groups of people, there would be handicapped individuals who would benefit from the services of homemaking activities. However, it can be assumed that only small percentages receive services.

The summary of the questionnaires gives some indication of the locations where rehabilitation is being carried out. One of the facts revealed is the physician's referral of all physically handicapped individuals for treatment. Yet all physicians are not acquainted with the rehabilitation process. About 50 per cent of the medical students today have a formal exposure to rehabilitation in medical school.

How many persons, even among you who are engaged to some extent in rehabilitation, are aware of rehabilitation services in existence in your community? How many physicians, and people in general, are aware of the need for early and continued rehabilitation services? How aware are you that programs in rehabilitation in communities develop into accepted institutions only when the physi-

cians, community agencies, professional organizations and the complex of other organizations in society, work together to determine the *needs* of the physically handicapped in their community? Do you know that this need can be realistically interpreted into a planned, coordinated program? Is your understanding sufficient to motivate you to contribute your professional and financial support? These questions are vital to you, because the answers to them enable you to approach intelligently the problems of the handicapped in your community.

Acceptance of Services

Let us speculate for a moment on the patient's acceptance of all these services that we have to offer. What are the aspects of his illness that he must face beyond healing and treatment? Reality is the hardest to accept. The disability will foster strong feelings of inadequacy and his role in life appears futile. It is important that he accept *reality-oriented rehabilitation goals*. Other essentials are the establishment of *satisfactory substitute behavior patterns* as part of his accepted role, the gradual building up of emotional reserve to deal with the frustrations that are imposed upon him by his disability, and, finally, the degrees of independence with which the handicapped person can function and the acquisition of the proper degree of emotional invulnerability in dealing with his daily contacts. This is a tremendously large order that faces all of us and we find it difficult even without a disability. How much more difficult it must be to unlearn and to adjust to a new role in life.

The patient's attitude toward himself and other people is influenced by the staff that is treating him. That staff must be aware of the barometrical emotional changes in the personality of a person with a handicap. It can support, encourage, influence, and understand, but the acceptance of rehabilitation services in any aspect, in the final analysis, is the patient's decision. The following cases include a homemaking view:

JERRY, a 45-year-old miner, had lost two arms and was wearing a bilateral prosthesis. He had two *early* requests. He wanted a stump cuff with a spoon so that he could eat unaided. He wanted his clothing altered so that he could dress himself. He was ready to accept treatment with co-operative spirit when these problems were considered. Later in the treatment program, the preparation of simple foods when his wife was absent was discussed. The occupational therapist had incorporated into the program the early requests for adaptive equipment, assistive devices and body mechanics related to dressing activities. In the area of work simplification and home management, when Jerry was presenting this as a realistic later request, *it was apparent that lack of time and knowledge did not permit the occupational therapist to carry this out as well.*

MARY was a 63-year-old housewife of European extraction who had suffered a left hemiplegia. She was able to ambulate with the aid of a brace and cane. Her husband worked, and she was waited on by three daughters who carried out her every wish. She worked hard, accepted treatment, but appeared to lack full participation in the program. In the bilateral arm exercises carried out in a standing position, she commented that this was like rolling out dough in her kitchen. It was learned that her children would not let her work in the kitchen and, as this had been her work area all of her life, she felt useless. Her one desire was to make a pizza. In brief, her treatment program was tailored to her special will *to do*. Her body mechanics were assessed and she was taught to compensate or substitute for certain movements in the model kitchen. She prepared lunch for a selected group of patients. Her medical condition indicated hypertension and a cardiac defect and, although she could not do the other housework, it was felt that preparation of one meal a day was possible.

How could the occupational therapist have been helped by the home economist in this instance?

BARBARA was a 15-year-old cerebral palsy girl with a spastic right hemiplegia. She was alert, co-operative, and was able to take care of her personal needs. She enjoyed housework but her mother never permitted her to work in the kitchen for fear of injury. The mother also felt that her daughter would probably not marry and therefore should get an education in order to earn money. Barbara had a slight speech involvement and could use the right hand only as an assistant. The school authorities had not approved attendance in home economics classes. Early during treatment, she confided her desire to be able to cook in the kitchen. She enjoyed housework and felt that she might like to work in a hotel or hospital. Her occupational therapy treatment consisted of an evaluation of a specific treatment program and a program of activities of daily living (ADL) which included kitchen activities. In a later program, when Barbara was 16, arrangements were made with the dietitian to have her tested in institutional work activities for three weeks in the summer. The result was a happy, motivated young girl, and an awakened mother, and a vocational counselor who felt that a realistic vocational objective had been achieved.

Could Barbara have been helped earlier by the nurse, home economist, school teacher, and others, in her vocational pursuit?

MRS. J. was a financially comfortable woman of 70, who had suffered from chronic arthritis which left her with severe limitation in her upper and lower extremities. She lived alone in an apartment hotel. Her greatest pleasure was to invite friends in for simple meals. Her compact kitchenette was the work area permitted her, as her major meals were eaten in the hotel dining room. Her rehabilitation treatments had increased range of motion and had enabled her to gain and maintain independence.

How could a home economist's skills have assisted in making this woman's life more complete?

JIM was a 40-year-old married man with two children, a boy, 7, and a girl, 9. Prior to his automobile accident he had been a bookkeeper. The injury to his spinal cord resulted in paraplegia and he was confined to the wheelchair a great portion of time. His previous medical his-

tory of diabetes complicated his vocational picture and his eventual goal was working in his home. He was a co-operative patient who developed skill in handling his body by developing his upper extremities and mastering the rehabilitation techniques taught. The vocational counselor called upon the occupational therapist for home modifications and layout of office working areas as he could be self-employed keeping the books of several small local businesses. His wife worked as a secretary in a local insurance concern.

After Jim had been home for three months he realized that he could carry out a great number of the household activities and home management chores with the children's help to relieve his wife. He turned to the occupational therapist for help. The occupational therapist met with Jim and noted his proposals for meeting the problem. She then called in a home economist and together they worked out a possible approach in work simplification and home management. The consideration of a diet for Jim that would be palatable to the family was another consideration. The home economist agreed to visit the home to gather further insight into the problem and discuss with Jim's wife her present management. This combined effort was most effective and the occupational therapist, on the advice of the home economist, followed out a joint plan.

Creating a Rehabilitation Team

We have raised the question of homemaking needs as met by other workers in the rehabilitation of the patient.

What course content does a home economist consider essential to the rehabilitation team members in order to make them aware of homemaking activities? The following projected content is offered:

1. Time, energy, conservation.
2. Home management.
3. Homemaking aids.
4. Work simplification.
5. Illustrative literature.
6. Demonstration exhibits.
7. Upgrading homemaking activities.
8. Education toward improved homemaking.

What can we do to help each other in providing improved service to the handicapped? As professional people, we find that as individuals we have just so much time and energy available for living and a portion of this is devoted to work. As professional people, we all suffer from shortages of personnel in our respective fields. Home economists, as well as those in the health careers, suffer this lack of trained workers. Often this results in the voluntary contribution of time to get a job done.

The distillation of homemaking activities into programmed learning for the field of rehabilitation might be a challenging approach by the home economists in educating other professions. Each pro-

fessional who is a member of the rehabilitation team, by the same token, could make a tremendous contribution if he considered planned programmed learning material, which could be made available to other professionals. This type of common core knowledge of other professions is essential to understanding.

The rehabilitation team members are basically not trained teachers. They are knowledgeable in the composition and functions of the mind and body that go to make up the personality. This mind and body, when disabled due to injury or disease, demand their combined skills to return the patient to useful functioning. Along with the medical problems, the rehabilitation personnel is concerned with the emotional glue which holds mind and body together as a personality.

Each of us has a self-identity and a professional identity. The professionals in rehabilitation have a third identity as a rehabilitation team member. In this identity they are asked to submerge their professional identity to meet the needs of the patient. The good of fellowmen is the major concern. This is a basic, simple, humble approach to another human's needs. It guarantees no professional credit or identity except the self-satisfaction and professional satisfaction of seeing another person achieve something as a result of combined efforts.

Professional persons should strive to know themselves and be aware of their professional skills. If they are to contribute to the rehabilitation effort they must bend their efforts to enable the handicapped person to find the acceptance of his disability within an identity that enables him to live in our free world.

REPRESENTATIVE PROGRAMS IN PATIENTS' HOMES

INEZ JENSON, OTR
Occupational Therapy Consultant
Visiting Nurse Association
Detroit

I HAVE SUMMARIZED the responses of 28 agencies administering service programs in rehabilitation in homemaking activities in patients' homes. Seven of these programs are tax-supported; 21 are financed by a combination of private and community funds and patients' fees. They vary in size from small programs serving a few patients to those serving over a hundred. Twenty-six programs are

directed by occupational therapists; one is directed by a rehabilitation counselor; and one is directed jointly by a nurse and a physical therapist. Other professional personnel utilized in these programs include physicians, social workers, home economists, dietitians, nutritionists, psychologists, and engineers.

Approximately two-thirds of the programs are carried out in both the hospital, the rehabilitation center, or both, and the patient's home. Only one program is carried out entirely in the home; the other programs, according to the responses to the questionnaires, are extended into the home "occasionally," for "follow-up" and "when feasible or possible," or when "the doctor determined the home visits should be made." Some programs utilize the services of Visiting Nurse Associations for extending care into the home; others use rehabilitation counselors.

A variety of equipment and physical settings are used in the programs. While a few have no specialized equipment at all, the majority use a simulated situation, i.e. kitchen, bedroom, bathroom, and living room. Members of a small group use a kitchen area only. Most training facilities are planned by the occupational therapy staff; a few by a combination of the rehabilitation team.

Programs are designed to rehabilitate patients of all ages and with all types of disabilities. Only one program is limited to one disability—tuberculosis. Two-thirds of the patients are referred by physicians; the remainder are referred by community agencies including the vocational rehabilitation agencies and by insurance companies. The criteria for eligibility to these programs can be easily described in one word, "need." A philosophy of the programs can perhaps be deduced by the comment on some questionnaires—"If in doubt, patient given a trial evaluation." In most programs, the occupational therapist evaluates the potential of the patient in homemaking activities. A small number of agencies use a combination of personnel for this evaluation.

The content of the homemaking rehabilitation programs includes (1) work simplification and selection and adaptation of household equipment, (2) remodeling or re-arranging of home facilities, (3) clothing selection and care, (4) psychological needs and family relations, (5) child care, and (6) nutrition. The content of program varies from agency to agency.

The programs use a combination of individual and group instruction, generally an hour for each unit. The length of the course depends on the need of the patient.

Although one-third of the agencies use no printed instructional materials, two-thirds use a wide variety of pamphlets (mostly from health agencies such as Arthritis Foundation, American Heart Association, and others), and a few use films and filmstrips.

The 28 agencies administering home services in rehabilitation in homemaking activities listed their most difficult problems. I have grouped these into two broad categories. First those involving the patient and his family; second those problems related to administration and staffing. What are these problems? All of you could anticipate them if we had the time to do this together. They are problems involved in any program of rehabilitation where a change in behavior and in attitudes is necessary.

The problems identified with the patient and the family are:

- Lack of interest or motivation.
- Lack of follow-through at home.
- Lack of acceptance of physical limitations.
- The overprotective spouse or family—especially the retired husband.
- The female patient with little interest in homemaking before she became disabled.
- The brain-damaged patient.
- Problems related to the changing of the environment of the patient; for example, landlords who refuse to allow installation of devices such as grab-bars in bathrooms.
- The need of inexpensive assistive devices.
- The need for finding inexpensive ways to change the environment of the patient to implement rehabilitation.

Problems relating to administration and staffing are—and here again are actual responses from the agencies:

- Lack of follow-up programs after discharge from training center to home.
- Lack of referrals from physicians and the need to educate physicians in the value of homemaker rehabilitation.
- Shortage and rapid turnover of staff.
- Financing expensive equipment.

Do these problems sound familiar to you?

Community Service Programs for the Future

I have summarized for you what is being done in the 28 agencies responding to the committee's questionnaire. I have also identified the needs and problems which they are experiencing in administering their programs. From my own experience as an occupational therapist participating in a home-bound program, I would like to share with you some of my convictions about a design for community service programs for the future.

I believe that we need a combination of programs such as these we are describing at this session. We know that rehabilitation

should begin with the medical treatment at the onset of the patient's illness or disabling condition. Let me review for you some of the reasons why I believe that no community program is complete which fails to provide service to patients in their own homes. Those of you who are public health nurses will recognize that these are almost verbatim statements from Ruth Freeman's book *Public Health Nursing Practice*.¹

Miss Freeman makes the following points in discussing the advantages of the home visit over other methods such as the office conference, group conference, etc.

1. The home visit permits the occupational therapist or the responsible professional person to see the home and family situation in action and is apt to provide a more accurate appraisal of family relationships, facilities, and competencies than could otherwise be secured.
2. The home visit permits teaching in the home situation without need for the family to make a transition from general instruction to their own facilities or equipment. This is especially important for the patient who has suffered brain damage, who has an aphasia, etc.
3. The family members are less hesitant to raise questions than they might be in the hospital or treatment centers, since they realize this visit time is theirs alone and need not be shared by others.
4. The occupational therapist or other professional person has an opportunity to observe the participation of family members in the plan and checks on the patient's and the family's understanding of instructions given.
5. The family gains confidence in the direct, personalized contact. Its members obtain support from the occupational therapist's presence.

These considerations are particularly relevant to the program where the same personnel extend the service into the patient's home. When this is impossible, continuing service may be arranged for by referrals to a community agency such as a Visiting Nurse Association which administers the program for which I am responsible.

Let me tell you about Mrs. Jones, a 26-year-old woman with hemiplegia and residual brain damage, who was referred to the Visiting Nurse Association by a rehabilitation center for homemaking services to assist her in the management of her home. The referring center felt that she had reached her maximum training as far as its

¹ Published by W. B. Saunders Company, Philadelphia, 1957.

service was concerned. Mrs. Jones had been trained to be independent in self-care and to assist in household activities. The family consisted of the patient, her husband, and three pre-school children. With orders from the rehabilitation center and with our public nurse coordinating services, our physical therapist demonstrated an exercise program to be carried out at home by the family to maintain the patient's rehabilitated status. As occupational therapist, I worked with the patient, her husband, and their housekeeper to assist Mrs. Jones to transfer her skills from the rehabilitation center to her home. Our nutritionist assisted the public health nurse to evaluate the nutritional needs of the family, which were found to be many because of the absence of the mother from the home and the pressures on the husband. Assistance with family budgeting and with food buying was particularly welcomed by Mr. Jones. The health of the children and the husband were evaluated by our public health nurse who will continue to visit as long as there is a need for any of our Agency's service. All of these services contribute to the family's health and welfare and serve to maintain the gains which Mrs. Jones made at the rehabilitation center.

Each community has a responsibility to provide services for the rehabilitation of disabled homemakers in homemaking activities. I believe it will require a combination of service programs such as we are discussing here. They will need to be coordinated with the other health and welfare services in the community so that the total needs of the disabled homemaker and her family can be met.

REPRESENTATIVE PROGRAMS IN COMMUNITIES

EVELYN LYMAN

Extension Home Management Specialist

University of Rhode Island

Kingston

Rhode Island Division of Vocational Rehabilitation Project on Rehabilitating Handicapped Homemakers

IN SEPTEMBER 1960, George F. Moore, Jr., Chief of the Division of Vocational Rehabilitation in Rhode Island, asked Elizabeth Crandall, professor of home management at the University of Rhode Island, to train one of the Division's counselors in work simplification. Subsequently, Mrs. Crandall invited me to cooperate with her in conducting a short course in work simplification for profes-

sional persons. We limited the enrollment to an invited group of 12 people. They included two from the State Department of Welfare Division of Public Assistance, three home economists from utility companies, three supervisors of District Nurses, the State Department of Education supervisor of home economics, the program director of the Rhode Island Heart Association, and two vocational rehabilitation counselors.

There were five two-hour sessions. These included home visits to a cardiac patient and to a patient with multiple sclerosis whose husband had a heart condition and a workshop session at which we made some household aids for the two patients.

As a result of this project, Mr. Moore invited me to assist in setting up a team approach to rehabilitation of handicapped homemakers at the Newport City Hospital. Mr. Turner, superintendent of the hospital, was very much interested in cooperating in the project, as they are working toward "progressive care" units in the hospital. He offered the facilities of the hospital for the project and pledged the cooperation of his staff.

THE TEAM

On the first of March, 1961, the team began its work with handicapped women. The team was comprised of:

1. The DVR counselor who was co-ordinator of the entire project.
2. A physician (cardiologist and internist), who was reimbursed by DVR for two hours per week to work with the team.
3. Head of the Social Service Department of the hospital. (She refers many in-patients and out-patients to the team.)
4. The physical therapist of the hospital.
5. The supervisor of nurses at the hospital.
6. Director of District Nurse Association.
7. Psychiatric social-worker from Family Service Agency.
8. Home management specialist from the University of Rhode Island Extension Service.

HOW THE TEAM WORKS

The DVR counselor presents a summary of the case to the team in a roundtable discussion. Members of the team discuss the case informally, asking questions and making suggestions as to what kind of therapy or training seems indicated.

Sometimes the counselor has previously arranged for the patient to be at hand and, after a briefing of the team, the patient is called in and presented to the team. Anyone on the team may question the patient, but this is always done with great consideration for the patient and under the guidance of the physician on the team. The patient retires from the room, and the team makes a joint decision

as to steps to be taken. At the recommendation of the team, one discipline or another is called on to take its part in the rehabilitation of the individual. For instance, physical therapy is authorized to be supplemented with a home visit by the home management specialist to assist the patient in evaluating home equipment and methods of working, in the light of her limitation. All of the assistance recommended by the team is given outside of the regular team conference.

Part of each two-hour session of teamwork is devoted to reviewing previous cases and having reports of progress on patients. Each team member who has functioned on a case will report her contacts with the case, and will make recommendations to the team for the next steps to be taken, or will ask the team to evaluate the situation.

WHAT WE THINK OF TEAM APPROACH

We feel that the team approach is *the* approach to rehabilitation. We feel that the physician is an essential part of the team, and he places priority on his responsibility to the team, which rarely meets without him. He can interpret to all members of the team the medical significance of the case history and can advise the team for or against a suggested procedure in the light of the probable effect on the patient for good or ill.

The team has worked together very harmoniously. No one says "This is my case," nor "I think *I* should do so-and-so." Usually the team member is asked by the others if she will contribute her efforts and skill in the way the team thinks will be helpful.

Only rarely has a team member been really opposed to the recommendation of the majority of the team. In one case the physical therapist felt it was a waste of time to continue our efforts at rehabilitating an amputee because she did not follow the therapist's instructions for exercising at home between treatments. However, she finally agreed to the group decision to have physical therapy treatments continued in the patient's home (by another therapist) instead of in the hospital.

SOME RESULTS

During the first year of the Newport Hospital project about 100 patients were assisted individually. There was a wide variety of disabilities in the group. They included those disabled by heart condition, arthritis, polio, multiple sclerosis, cerebral vascular accident, neurological disorders, blindness, circulatory problems, and diabetes. At first the majority of the patients were referred to the team by the Social Service Department of the hospital. But since the patient's own physician or surgeon is always consulted before a case is accepted by the team, we find now that the doctors themselves frequently refer patients to the team.

Among the 100 patients assisted in the first year were several who responded especially well. The very first case was one of these. She had had surgery for an arthritic knee and at the time she was referred to us she was receiving daily physical therapy treatments at the hospital. Because she was unable to travel by bus and had no one to bring her she was an in-patient. But she was very eager to be at home where she could do something for herself. Her son's family lived downstairs and could help her, and she felt she could help them if she were at home to baby-sit with their two small sons. Vocational Rehabilitation authorized taxi fare for her to get to the hospital and home again every day for therapy. The therapist instructed her in exercises to do at home. The home management specialist called on her and helped her to rearrange her kitchen utensils so that she could reach and use them without help from her daughter-in-law. A few simple storage aids were provided through cooperation of the vocational department of the local high school. The patient was very resourceful and it wasn't long before she was doing all of her daily household tasks as well as part of the ironing for her daughter-in-law. Soon she was taking the bus to the hospital instead of using the taxi. Within four months she was back part-time at her previous job as a *nurse at the hospital!*

Another case was that of a 39-year-old widowed mother of five whose left side was paralyzed as the result of a cerebral vascular accident. The team decided that she should have physical therapy more frequently. So a taxi was provided for her to get to the hospital for treatments. She did her exercises at home faithfully and within three months was walking with a brace and a cane instead of crutches. She took great pleasure in sewing and mending for her children. With the aid of a sewing hoop which she could steady with her foot she was able to do the sewing she wished to do. She had always been proud of her ironing and found it difficult to do it with one hand. The home management specialist showed her the method of moving and turning her work as few times as possible which helped to get a satisfactory result in ironing. She also taught the children the quick ironing method to inspire them to assist with the family ironing.





SHARING PLAY ACTIVITIES EASES DISCIPLINARY PROBLEMS

J. A. Manter, University of Connecticut, Photo

SECTION III

AVAILABLE RESOURCE MATERIALS—ON NUTRITION

- ON CHILD CARE
- ON CLOTHING
- ON HOME
MANAGEMENT
- ON HOUSING
- ON FAMILY
RELATIONS

NUTRITION AND THE HANDICAPPED HOMEMAKER

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SINCE OUR AIM is to rehabilitate the handicapped homemaker, our goal in nutrition should be to have her eat as normally as possible.

The path will not be smooth and there will be difficulties to overcome. In the very beginning, we may have to do some training in the arts of chewing and swallowing. As we progress, it may be a struggle to move from the invalid regimen of spoon-feeding tea, broth, and gelatin to the proposition that a well-balanced diet is in order and that Mrs. Homemaker can be expected to feed herself.

From time to time we must expect to cope with those around us who have some rather odd ideas about food suitable for the handicapped, with the patient's own ideas about what she should or should not eat (sometimes based on a fear of choking) and our own lack of background in what constitutes good nutrition for the handicapped homemaker.

If our goal is to have her eat as normally as possible, let's take a look at what is considered a good meal pattern in the United States

today. The United States Department of Agriculture spells it out for us in simple terms with "A Daily Food Guide for Fitness" condensed into "The Basic 4." It is the framework around which three meals a day may be evolved quite simply according to food favorites, the food budget, and foods available in season. The suggested pattern of choices is based on what is known about people's needs for vitamins, minerals, protein, and other nutrients.

Milk, cheese, and ice cream make up the first group. Two glasses of milk a day is the recommended amount for adults to meet the calcium requirement. It is interesting to note that for those who are not fond of milk and do not take enough in the form of creamed dishes, milk in coffee, and so on, a one-inch cube of Cheddar-type cheese equals two-thirds cup of milk, and one-half cup of ice cream equals one-fourth cup of milk.

The meat group lists two or more servings of meat, fish, and poultry, with eggs, cheese, dry beans, peas, and nuts as alternates. When the budget is limited, it is reassuring to know that relatively expensive proteins may be augmented with the less expensive cuts of meat such as hamburger and that good substitutes any time are American or cottage cheese, eggs, and peanut butter.

Vegetables and fruit, a third group, furnish vitamin A and nearly all the vitamin C available to us from food. Four or more daily servings of vegetables and fruit are recommended in the guide. For maximum vitamin A, emphasis is on the dark green and deep yellow vegetables. Since vitamin C is not stored in the body, a daily serving of citrus fruit is important.

The last group includes breads and cereals. We are free to choose four or more servings of cereal products such as bread, cooked cereals, ready-to-eat cereals, crackers, macaroni, spaghetti, and some of the wide variety of baked goods that are in our markets today. These goods, especially the whole grain, enriched, and restored kinds are valued for protein, iron, several of the B vitamins and, of course, calories.

You will meet people who extol the magical properties and beneficial qualities of certain foods or combination of foods and you may begin to wonder about the advisability of using lots of blackstrap molasses or honey and vinegar or carrot juice. The food faddists among us are loud and persuasive and wear many hats. In this 20th century it is no longer possible to judge the authenticity of the advice you are getting from the status giving it. At the present time, some who are peddling misinformation are professional people, movie and TV stars, and health food store operators.

How can you detect a quack? If the person or book or newspaper telling you the food "fact" is (1) advocating something different from the Basic 4, (2) something not sold in supermarkets or

(3) or advocating a miracle food to be eaten in excess—this is quackery.

In attempting to follow the Basic 4 with our handicapped patient, we may bump into a problem in food consistency. Perhaps her dentures are poor and she cannot chew steak; maybe she cannot chew at all at first and can tolerate only liquid or puréed food. The food groups are elastic enough to include choices of each consistency in each group. Care should be taken to encourage the patient to progress as soon as she is able from liquids to purées, to chopped food, to soft food, and on to a regular diet.

There will be other problem areas. Let's take a look at what has handicapped the homemaker and how these events may influence her nutritional state.

With cardiovascular difficulties, list heart disease and hemiplegia. The doctor may order a sodium restriction or a diet high in unsaturated fatty acids to lower cholesterol. The local Heart Association can offer help here with booklets explaining how to follow such diets. The California Heart Association has an interesting pamphlet listing commercial food products that can be used in a controlled-fat diet with brand names and where these may be purchased. There are low cholesterol cookbooks on the market now which are helpful.

The hemiplegic may have to be retrained in chewing and swallowing; certainly should be encouraged to take an interest in things around her and urged to do what she can within her own limited capability. She may enjoy six small meals a day rather than three large ones.

Accidents and abnormalities produce another group of handicapped people who suffer from paraplegia, cleft palate, cerebral palsy, or orthopedic problems. One-handedness and cooking from a wheelchair have a bearing on the nutritional status of a homemaker since her range of motion is impaired and she must learn new ways of doing simple kitchen chores. At first, she is fearful, lacks self-confidence, tends to feel she is no longer useful. The trick is to get her into the kitchen as soon as possible, encouraging her to learn new ways of accomplishing familiar tasks. She needs to explore labor-saving devices, convenience foods, and casserole cookery.

With a cleft palate or cerebral palsy the question is *how* does she eat rather than *what* does she eat. It is our responsibility to help these patients help themselves. Each needs an adequate diet and patience is needed to see that she gets it.

Diabetes sometimes frightens people who become involved in the meal planning. This is because we do not stop to realize that diabetics, too, must follow the Basic 4, and with the exchange lists in use today, this is fairly easy to do. The Diabetes Association and

the companies that manufacture insulin have excellent background material. To lead a normal life, the diabetic must evolve a workable meal plan based on the prescription her doctor has given her. With it, she can enjoy satisfying meals, participate in special functions, dine out, and even have a snack while watching television. At Orange County General Hospital, Orange, California, the milk diabetics in the Rehabilitation Area have done well on regular diets with fresh or sugar-free canned fruit for dessert. They have either bread or potato (or potato substitute)—not both—at each meal. They use a sugar substitute and are not offered second servings and get along well with about 1500 calories.

I have left the obesity problem until last since it affects those with heart disease, polio, arthritis, paraplegia, and other problems—and as you and I know, obesity is the number one health problem in this country today.

For prevention and cure we once again turn to the Basic 4. We choose from each group in the amount indicated and neglect to add the fat, sugar, gravy, rich desserts, and so on that the slender are free to choose to make their meals more satisfying. Strict adherence to the Basic 4 makes the food choices add up to about 1200 calories if skim milk is used. This diet with a small amount of the extras might prove a good plan for the homemaker handicapped by only advanced age since she needs the same nutrients as her younger relatives but fewer calories.

If reading material is needed to get these points across, a wealth of such material is available free of charge from the life insurance companies, the dairy industry, the American Medical Association, the National Live Stock and Meat Board, and the U.S. Department of Agriculture, to name a few.

We would like to see more such literature written in simple terms in large print. Both the diabetics and the elderly are prone to be troubled with poor eyesight. The low-income groups with less opportunity for schooling than the general population need help in forming good eating habits. The University of California Agricultural Extension Service has created a one-page pictorial description of the Basic 4, written in Spanish, that has been a help in our rehabilitation program at Orange County General Hospital and we would like to see more of this sort of thing.

Food Preparation as Therapy

Part of our Rehabilitation program at Orange County School Hospital includes getting the handicapped homemaker back into the kitchen while she is still in the hospital.

This seems like a revolutionary idea to some, but in many instances we have found it to be the greatest single factor in helping

the handicapped return to a useful life in society.

Patients for this therapy are chosen from among three groups:

The first group are those who have been hospitalized so long that they have lost the will to participate in anything. It was felt that cooking would especially appeal to women, but attendance figures over the past three years show that weekly sessions have included about as many men as women.

The second type of patients are those who are learning to live with a disability, those eager to return to a small apartment or trailer to care for themselves. These patients are housed in a self-help unit, and come to the kitchen to learn skills that will enable them to prepare their own meals at home.

The third group consists of patients who are scheduled for intensive physical therapy. This change in a daily routine of exercises motivates these people to work harder to exercise damaged muscles.

The patients come to a lounge area that has an adjoining kitchen. In fact, the kitchen was built in one corner of the lounge when a nearby ward kitchen grew too small for the work load. No special gadgets or equipment not found in a home kitchen are used. Dining tables are pushed together so that wheelchair and ambulatory patients can sit and chat together as they prepare lunch. The social situation is as much a morale builder as is the work accomplished.

Each patient either follows a recipe by himself or helps with chopping nuts, greasing baking pans, or other simple tasks as he is able. The cooks start at 9:30 a.m. and have a full lunch on the table for as many as 20 of their number and guests by noon.

The cooks favor casserole dishes whose ingredients can be prepared at the work table with a little help from an electric frying pan or saucepan. When the meat loaf or tamale pie is assembled, it is popped into the oven—sometimes with the help of one of the two or three adult volunteers on hand. The volunteers—home-makers from the community—offer encouragement, praise, and help where it is needed.

While lunch is cooking, the dietitian in charge of the program leads an informal discussion of the Basic 4 and distributes recipe folders for home use. The dietitian assumes rather a novel role here. She has made rounds thoroughly enough to know the patients well, and therefore can serve as the catalyst to precipitate the subtle change from dependent patient to independent worker during the course of the morning.

Every effort is made to create a party atmosphere with fancy luncheon cloths, pretty dishes, place cards, and flowers. Often doctors and nurses are luncheon guests with the cooks deriving great pleasure and satisfaction from catering to these guests after being

on the receiving end of things themselves for so long. This changes the emphasis of their thinking from themselves to others. This is perhaps the single most important turning point in their recovery history.

As this happens in the kitchen, patients are progressed within the hospital from an intermediate care unit to the self-help unit. In the self-help unit they care for their own rooms and take their meals boardinghouse style—or family style according to the size of the group. At mealtime, then, they must think of the other fellow by passing food and keeping conversation going. The less handicapped assist others, and the severely handicapped benefit from the exercise in handling the heavy plates as well as the thinking they must do to communicate.

In the Wednesday therapy kitchen sessions, diabetics practice planning their diets from the regular menu, making changes where they must but essentially participating in the party. In the self-help unit, they learn to avoid the sugar bowl and to refrain from taking more bread than their diets call for.

Occasionally, a little old lady or a younger person badly crippled is belligerent and reluctant to participate on the grounds that she is too ill or too weak or too something. It usually turns out that she is afraid of failure; and once she has been encouraged to turn out a beautiful batch of cornbread, her attitude changes and she is even willing to try a lemon pie.

Besides the regular Wednesday luncheons, other successful projects have been dyeing Easter eggs for hospital trays, making open-faced sandwiches and cookies for a staff tea, making fancy Christmas cookies, and preparing box lunches for the cooks to take out of doors to eat picnic fashion.

VISUAL AIDS

Illustrative materials help to explain our program. First we have a folder of 100 recipes that have proved to be most popular with the handicapped cooks and have been used over and over again since the sessions began three years ago. The recipes were run off on a ditto machine and the folder is made up of about 20 sheets of standard typing paper stapled together.

The folder has an introduction from the hospital food administrator in which she explains that the raw food is supplied by the hospital main kitchen, hence little of the so-called "convenience foods" are available. She goes on to say that casserole cookery is favored because ingredients are easy to assemble and mix; that peanut butter cookies and fudge are made often because forming balls of dough for the cookies and the beating required by the fudge is excellent exercise; and that party fare such as cheese

straws, asparagus soufflé, and skillet stroganoff lend a festive touch to the luncheons and interesting variety to the more usual hospital fare.

The cooks use the folder as a basis of their menu plans and are given folders to take home with them when they leave the hospital.

Since no funds have ever been budgeted for this kitchen therapy, we try not to miss a fund-raising opportunity. The occupational therapy department made ornamental covers for 100 of these folders and sold them for 50 cents each at the annual patient bazaar. The bazaar is attended by visitors and hospital personnel, and proceeds are used to help finance occupational therapy.

Here are two typical menus planned lately by the cooks:

Mushroom meat balls	Baked stuffed potatoes
Spanish rice	Asparagus soufflé
Green bean bake	Assorted relish plate
Baking powder biscuits	Melon salad
Cinnamon pinwheels	Banana bread
Old fashioned cole slaw	Cornbread
Fruit gelatin	White cake with baked on frosting
Chocolate fudge	Red devil food cake
Oven baked chicken	
Tamale pie	

Slides of the physical layout of our facilities show the cooks in action and record progress and events. Following are descriptions of some of the slides:

1. A wheelchair cook has made toast for a morning coffee break. She has paused a minute in a corner of the L-shaped kitchen between stove and sink—a second-hand donated gas stove and a standard sink. The carpenters did not put cupboard doors below the sink so that a wheelchair can be rolled close. The toast was made on a regulation pop-up toaster.
2. Two women are at work at a table in the lounge area. A volunteer in a pink smock is holding the edge of a pan to steady it for them. This desire to “help” the handicapped rather than to encourage them to go ahead on their own is perhaps the biggest obstacle we have to overcome in our program. We tell the able-bodied volunteers that when this urge to help becomes too strong that they are to go sit down in a chair with their hands folded! Accidents have been no problem. There have only been a sprinkling of the minor burns and cuts sometimes suffered by any cook.
3. A picture of the group emphasises the lack of special equipment. Cooks are using tables which later will be converted into luncheon tables as they work in the lounge area. A dietitian is helping a paraplegic interpret a recipe. Patients are using home-type “plastic bowls and canisters that have been donated (they are light to handle and do not break) and some of the heavy duty stainless steel pans borrowed from the main kitchen.
4. As the cooks tire or finish a recipe they rest or perhaps travel to the hand-washing sink. In the background is a paraplegic in the early stages of

recovery. She finds it stimulating to observe and just be a member of the group.

5. This teen-ager dove into shallow water and broke his neck. He is able to open and close his hands and use his fingers with the use of an artificial muscle that operates when he presses one arm against his side. As may be imagined, he was withdrawn, depressed, and critical of hospital fare which did not include much of the hamburgers, French fries, and Mexican food he was used to. He came to the kitchen weekly for two years before discharge. He had never cooked before but soon was turning out Mexican dishes hot enough to improve his spirits and depress ours since we had to at least sample his work in order to praise it. He tended to become quite lazy in his daily routine of exercises but was willing to go all out in the kitchen to grind cheese or beat the fudge before it hardened.
6. This man proudly displays the hot breads he has made despite one-handedness. Quick breads such as cornbread, baking powder biscuits, and banana bread are relatively easy tasks for beginning cooks who like to work up to the more complicated dishes in easy stages.
7. Interns assigned to the rehabilitation service are very welcome guests. This luncheon party includes two interns, a dietitian, and three male cooks. Patients delight in stumping the "experts" with an unusual dish. The day we had fried rabbit plus one of our teen-ager's mouth-searing specialties is well remembered by all.
8. This close-up shot of the volunteer passing the hot bread makes a good picture and perhaps again catches the happy spirit around the luncheon table. However, once again the volunteer is caught up in this urge to help the "poor patient" when the whole point of eating banquet style is the therapy the patient derives from passing plates and entering fully into the mealtime activity himself.

This therapy was started about three years ago when the medical directors of the rehabilitation and physical medicine departments asked the chief dietitian to meet with them to see if there were some way patients could become involved in food preparation. As an experiment, a dietitian and one patient went to a ward kitchen one morning to mix up a gelatin dessert from a packaged mix. The dessert was a success, the patient received compliments when she shared it with her ward mates and so offered to try something a little more complicated the following week. This led to a soup and sandwich combination for lunch, and since it is no fun eating alone she asked for company—and there we were.

When hospital personnel saw how badly home-type equipment was needed, they donated spare egg beaters, flour sifters, and the like. The hospital volunteer group soon became interested and provided the necessities. As we outgrew the ward kitchen, the maintenance department built cupboards and work space to form a larger kitchen according to directions given by a utility company kitchen planner.

We know that this therapy helps the patient to leave the hospital sooner than he or she would otherwise. We wish we had some means of follow-up, but at present we have none. We do get letters

and occasional return visits from our "graduates" which indicates that they, for the most part, have made the adjustment to family living fairly well.

CHILDREN OF THE HANDICAPPED MOTHER

JESSIE WALL, Professor of Education
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Hattiesburg

Cooperation is the Creative Way of Behaving

THE YOUNG CHILDREN of the handicapped mother will remember that they helped wash, sew, cook, iron, play, sing, and laugh. They will remember that they were given explanation and organization, that the limits of their behavior were clearly defined and consistent. They will know that the handicapped mother can open the doors of opportunity for them. They remember that together they shared the joys of living with their handicapped parents.

The pattern of behavior that must be cultivated in children of the mother with limitations is *cooperativeness*. Being cooperative is directly related to creativity which is the synthesis of ideas, skills, and experiences into a way of thinking and behaving that is uniquely one's own.

If fulfilling of the mother role is achieved, it will be ability—not disability—that counts. The direction of the growth and development of children is the toughest assignment faced by anyone, handicapped or not. It requires courage, leadership, and respect for, and by, other men and women as well as knowledge, experience and devotion to the job. The mother must build upon all of the child development knowledge she can get, set clearly defined goals and move ahead with confidence and love. Many have succeeded in meeting the demands of the big job—that of establishing trust between mother and child.

The mother can not develop for her young children, but she can assume the direction of their growth and development, and she can, by her guidance and explanations, develop cooperativeness in them.

"Mother never would let me help her. She always said it was easier to do everything herself." "I was an only child, and the first experience I ever had with children was when I had children of my own," say many handicapped mothers. Much has been done in this manner to handicap the child and limit his cooperativeness and adjustment to the complications of living. This gives him a more

severe handicap than the one the mother has. Doing those things for the child which he can do for himself handicaps him in maturing and in developing cooperativeness, responsibility, initiative and understanding of people and things around him.

WHAT DO YOU MEAN BY CREATIVITY? ASKS THE MOTHER

The important idea that must be got over to the young child is a creative way of thinking and behaving. Creativity is the way of thinking that implies the synthesis (putting together) of ideas, skills and experience into a way of behaving and thinking that is uniquely one's own. Cooperation is the way of behaving that is most related to it. The mother understands that every experience the child has, every explanation given him, and every skill—no matter how small or insignificant—is crucial if he is to develop early independence of thought and action that is so necessary for him during his early life with her.

The second big job of the parent is to give the child confidence in his end product. This does not mean that grading him A, B, or C will motivate him. He can be better motivated by the mother who says: "I like it." This is an honest evaluation, for it is easy to like anything the child does that is his very own. He is satisfied with this approval and builds confidence upon it without the tension of being compared to others or competing with others. Nothing undermines his confidence about solving problems and meeting situations that come his way as quickly as being compared with an adult or with an older or younger child in the family. By presenting the child with a task that involves the synthesis of ideas, skills, and experiences, guiding him and motivating him with acceptance and encouragement, the mother is establishing a *creative way of thinking and behaving that leads to his cooperation* with things and people and to understanding.

Young children developmentally are not naturally skilled at creativity. They have so *few* skills, have had such *limited* experience, and have such *unclear* ideas that what is seen in young children is their creative potential or their great opportunity to develop in this way.

A creative way of thinking and behaving is probably the most essential pattern that can be developed in young children, because it makes possible the use of all of the intellectual, emotional, and social forces within them. It is probably the factor that makes possible one person's adjustment to his problems and opportunities while another without it fails.

PLAY POINTS THE WAY

Play is the way a child orients himself to the world about him—to space, time, animals, structures, people and things. Through play

he learns to live in our symbolic world of meanings and values. Through play he strives to reach goals he sets for himself; he explores and he experiments. He practices and rehearses endlessly the complicated and subtle patterns of human living and communication which he must master as he matures. For these reasons, we should deliberately arrange ever-interesting settings. We should be a source of ideas and should furnish materials and ingenious equipment to aid and guide him in exploring further the wonder, magic and joy of living.

People formerly divided children's activities into play and work. Work was good, and play was sinful, noisy, and bad. Now we realize that play is *a child's work and work becomes a child's play*. Through playful experiences we present the child with unlimited opportunities to develop skills, explore and interchange ideas. Through explanation we present him with experience values that are integral to creative thinking and cooperative behavior.

THE WORLD OF MAKE-BELIEVE IS OPPORTUNITY UNLIMITED

Some people have gone all out to see that all of their children's toys, play equipment, and experiences are educational—that the toys teach a skill or convey some definite meaning at every turn. These are not bad ideas, but to deny the child the use of his rich imagination leaves him only with materialistic concepts, actual and specific. The world of make-believe is the child's world. A mop stick can become the most beautiful horse in the world, a broom can make him a witch, and a towel around his shoulders makes him Superman.

Imagination permits the child to explore the unknown and to find satisfactory answers there. Imagination substitutes details and fills in areas of experience that he has not yet had. It encourages the child to visualize and verbalize what kinds of goals he would like to set for himself. It is a creative thinking process where no materials, skills, nor tools are necessary. Everything we do to cultivate, direct, and use this gift is of value, for, from his imagination, the child will draw clues and ideas as to how to do and what is missing when he is playing. He goes from what he knows through the use of his imagination to what he wishes to do.

The child also seeks, through creative play, to discover himself. He needs to learn to bring himself and the part he plays into focus. He must understand what he can do and how he can relate himself to things and situations, to persons, and groups.

Much of his introduction into the social world comes when, day after day, he faces in miniature or symbolically all of the tasks of human living. What he makes believe and puts together in his play usually becomes the core of his later life just as his feelings toward people in these early years color his later attitude toward people.

WE CAN NOT PLAY FOR HIM, BUT WITH HIM

One must be careful not to take play and the fun of it away from the child. Sometimes, with good intentions, all the fun is taken out of play. The skillful mother will be able to play *with* the child. She can *not* play for him. The most helpful way to contribute to his play life is by providing materials, equipment, space, and the interchange of ideas. This needs to include safety factors, the mechanics of housekeeping, the current social demands, and the best that is known about the way children grow and develop. If it is known that the child is going to want to climb, then a safe place is provided for him to climb. At the time when he enjoys drippy, messy, and gooey explorations, the mother will provide some "get-as-dirty-as-you-please clothes" and see that he is clean once a day whether he needs it or not. He is permitted to make mud pies, play with finger paint and clay, and enjoy it in a place that cleans up in the easiest possible way. To understand how the child matures and outgrows a way of play and emerges into another is to possess a key enabling the handicapped mother to assume with confidence the direction of his development.

COOPERATION MUST BE HAD FROM THE CHILD

At the same time the child is asked for cooperation, the handicapped mother sets up a routine that lets him know what is expected of him by saying: "When you are ready, we will do . . ." or "Now is the time to do . . ." or "Let's do it now," or "Help me to remember." The child understands when he is to conform. He then knows the plan of action, as he is not yet ready to instigate it himself. It is an acceptable way of giving him an orderly and sequential security about *what is going to happen* and *when it is to happen* in order that he can cooperate.

The handicapped mother is not likely to be able to pick up a screaming, kicking, biting, and tantrum-torn child and force him to do anything. She is not likely to be able to threaten him with a "good licking," or with going out in the yard and cutting a "switch from the peach tree" to use on him. She will not find it possible to chase after him, retrieve him from the trees or the roof, or to go to look for him when he has run away. She must prevent such behavior (and this is an advantage in securing his trust and cooperation). She is unable to cope with uncooperative behavior. There would be a more stable generation of children if all mothers were so handicapped that they found it imperative to control themselves from acts of violence that are out of proportion to the nature of the child's behavior.

With some children it is necessary to deprive them of participation or to distract them by changing interest when tears flow and

tempers flare. Many times the child must be distracted from his immediate outburst before he is quiet and calm enough to listen to an explanation.

As soon as a child offers a possible explanation as to *why* he behaved in a certain way and looks for his justification and explanation of the conduct of those around him, he has achieved another stage of development.

The child will reach a time of readiness to cooperate with understanding that is relative to the amount of explanation that has been given to him and his ability to understand the explanation.

DOES THE CHILD EXPLAIN AND JUSTIFY THE CONDUCT OF OTHERS?

Some children are called tattlers. This is a sign of maturity. It tells that the child is evaluating the conduct of others. While he is seeing only the "bad" or negative, it is easy to suggest to him that he tattle something good. It indicates that the child is attempting to establish values for himself as to what is right and wrong in terms of behavior. He does not acquire a set of values overnight, and some children are never given the opportunity to acquire them at all. There will be a few children who will always see what there is about them in terms of things and not people. They never explain or justify or even tattle (be it good or bad). They are a different kind of child.

Some children, even very young ones, find it natural and easy to explain why some other child is crying, why the mother is cross, or unhappy, and go to them to comfort them or try to make them happy. Generally, those children have been given explanations of their own behavior and of the behavior of others.

"Your doing these kind and helpful things for me has made me happy. It gives me more time to spend doing things with you," will be sufficient explanation to secure the cooperation of most young children.

THE CHILD MUST ASSUME RESPONSIBILITY EARLY

"Will it frustrate my child if I thrust responsibility on him too early?" "Is it good for him to do things for himself that I can not do for him, but that others' mothers can?" "Will my disability handicap my child"? "Should I follow what 'books' say is the time for him to do things for himself?" ask many handicapped mothers.

Answers to these questions depend on the kind of responsibility and the explanations that have been given to the child. There are certain physical coordinative skills that are involved in many of the tasks under question. In child development, there is a technical term known as *indigenous motivation* (or motivation from within). It is necessary for us to understand this if we are to decide in each

case whether this or that is a task beyond what the child can do. It is involved in most skills where physical maturation is a basic concern.

A good rule of thumb to go by is that if the child is physically capable of doing the task, there is no reason to believe that it will be of anything but value to him to do it regardless of his age. An example is *walking*. Opportunity to walk might make some slight difference as to the exact time a child will walk first, but little that we do actually motivates him to walk any sooner than he is ready to do. It is most likely that he will take his first steps to the mother's outstretched arms. That is because she is there. Motivation from within (indigenous motivation) and physical readiness will control the time that he will walk. After that readiness is present, there is little that can be done that would keep him from walking. He may walk better wearing shoes with rough soles, on a soft carpet, or with something to hold to, but the act of walking will come when he is ready. No amount of practice will make a six-months-old baby walk when he is not ready nor motivated from within to walk.

He will talk earlier if he has been talked to. If he is not being pushed beyond his limits, he will do better. He is allowed to achieve his maximum in any field.

If fasteners are made easier to unfasten, he can unfasten them within certain limits. If ways and means are planned for him to store his toys, he will be able to pick them up and put them away as soon as he can dump them all out. Nothing will make it possible for him to do the plan of organization himself. He can do those things that he is physically capable of doing. He can play safely and happily with minimum supervision if a plan for it is clear to him. He can come out with ideas of his own if provided with sufficient opportunity to acquire skills and have experiences from which creative thought springs.

WHAT ABOUT "I CAN'T?"

"Can't" is mother-made; adults have asked for it to be included in the child's vocabulary and attitude. "*Why can't you?*" or "*Can't you do better?*" or "*Can't you do as well as John?*" has implied that he can't. We have compared him with another child who is older and *can* do better. We have been building in defeat by our very words and actions.

"A little more practice," "When you are older," "Keep trying—it will come," will frequently lead to success and self-fulfillment if they are used with real belief. If there is a task or a way of playing that is impossible, we say: "We will fix it until it is just your size," or "Let's save this for a surprise for next year," and guide

and direct the child into another activity where he can have moderate success. Awareness, patience, and acceptance can bring almost any child through his early years to effective and happy living. Self-confidence and *can* are as closely related as mother and child. Developing "I can" is part of the handicapped homemaker's task.

THE MOTHER'S HANDICAP AIDS THE CHILD IN ACCEPTING RESPONSIBILITY EARLY

The handicapped mother is at home, and there is a definite advantage in her being there. There are several million working mothers in the United States. Of these mothers, nearly 40 percent have young children. The child of a handicapped mother is not sent off to baby sitters while his mother works, nor does he come back from school to find the house empty while his mother works, nor does he come back from school to find the house empty while she is busy with various community endeavors. She is always there with him or waiting for him, and this is a tremendous advantage to a child.

EARLY INDEPENDENCE OF THOUGHT AND ACTION ARE DESIRABLE AT ALL TIMES

There is no handicap greater than that of the mother who does everything for the child that he can do for himself and keeps him dependent upon her long after he is ready for independence.

The handicapped mother can not handicap her child in this manner. As soon as he can, he becomes a useful helpful child and a satisfied one because of being so. This kind of cooperation is necessary to the mother. She is cultivating his interest in doing things for himself and in "helping Mommy" while the interest is present. Never again can this interest and desire to be helpful be achieved if it is passed by at age 3, 4, or 5. Pass up this opportunity, and it is lost forever.

Whether or not the child works with an organized plan depends again upon explanation. If he has had help in understanding "Why it didn't work the first time," in the light of the way he is going to do it the next time, he already has the basis of scientific thinking that leads to identifying the problem and solving it through an organized plan. If he is guided in his second attempt by what he learned in his first, the parent will have given direction to his thinking. Doing this guidance and giving this direction are above and beyond what most nonhandicapped mothers are doing for their children, and it is beyond price. Mothers are mothers, and *the only difference the handicap makes is that mothers so affected need to understand how to secure the child's cooperation and trust even more than do those not handicapped.*

ASSUMING THE DIRECTION AND SUPERVISION OF THE CHILD'S GROWTH AND DEVELOPMENT

Creative expression is as different as are individuals. The child's general growth is tied up with his creative development. Creative expression is one of the richest sources of our understanding of the child's needs, thoughts, and emotions. Great emphasis has been placed upon this phase of the child's development because it is so directly related to "do" and so unrelated to "don't" when it comes to parent-child relationships.

There has been an attempt made to apply psychological background to a practical situation—the best we know of child development has been used to try to solve the problems of a handicapped mother with young children.

Many parents begin with having an almost idealistic concept of self-discipline only to find that it does not work. The University of Connecticut¹ attempts to find *an* answer to one of the most common problems of *all* parents, handicapped or not, in the area of discipline of young children.

Some parents have a preconceived idea that the only contact the child needs with the parent is materialistic. He is handed things to do, and he enjoys doing them, or he does them wrong and loses interest. Some mothers feel that left alone without guidance in a natural healthy environment is the way the child will grow and develop from within by himself. Others feel that one should spare the rod and spoil the child or should discipline him to travel the straight and narrow way.

Much has been written about the control from without (parental control) and the control from within (self-discipline). The ideal situation demands much of both and a shift from parental control in the early years to self-discipline as the child grows older. During the early stages of life, the adult sets the limits, controls the child, and gradually transfers the responsibility to the child. Upon his past experiences with right and wrong, good and bad, yes and no, "you can" and "you can not," he is able to choose between the alternatives and take upon himself the responsibility of self-control.

The goal toward which parents are working is *to develop in the child the sense of responsibility and the basis for using and making good value judgments*. Through contacts with the child, the mother is concerned with building sufficient experiences to make good behavior, fair play, and rightness of thinking an integral part of his way of behaving. It should be quite clear that all of the things attempted in this phase of the Connecticut research project have

¹ A research project on Work Simplification in the Area of Child Care for Mothers with Handicaps. Co-sponsored by the School of Home Economics of the University of Connecticut and the Connecticut Team Approach Committee of Rehabilitation Agencies.

mental, emotional, and spiritual implications which are largely responsible for attitudes, actions, and achievements, as well as the development of the ability to get along in the world of people and things.

CHILDREN ARE DIFFERENT

So much has been written about the average child and about normal children that it is forgotten how very different one child is from another. There are much greater differences between one child and another than there are between the same child or another child when he grows from three to four. It is confusing to all when there is set some sort of standard (or norm) that supposedly applies to all children; there is no such thing as children-all-alike. When we compare one child with another one, we find that very little that is said about normal average children applies to both of them.

The guide that will give the handicapped mother the greatest help is to consider the *earliest* possible age at which the child can do things for himself. Give him as many opportunities as possible to develop skills, to have experiences, to exchange ideas, and to have explanations as early as possible.

Cooperative behavior depends on factors other than age. *First*, it depends on the child's personality, his uniqueness, his use of imagination, his degree of sensitivity, and his flexible relationship to his environment. *Second*, it has to do with his ability to put himself in the place of others. *Third*, it is greatly stimulated by the understanding of the adults who work with him. His handicapped mother—the director of his development—can assist the child to see, know, and understand.

The development of a creative way of thinking that leads to cooperative behavior in early childhood may well mean the difference between a flexible human being and one who, in spite of all learning, will not be able to apply it and will remain an individual who lacks inner resources and has difficulty in relation to his environment. Perceiving, thinking, and feeling are stressed in any creative process and may well be the necessary balance between the child's intellect and his emotions.

Many people have grown up to think that creative activity is related only to art work. It will be noticed that *creativity is related to the child as a whole* and becomes implanted in every phase of the child's thinking whether it be concerned with the use of art media, story telling, conversation, books, science, music, adventure, understanding his environment, sharing with others, or his total *cooperative personality*. Creativity is a qualitative aspect of intelligence that needs to be cultivated. The things that were suggested in "Play Experiences Handicapped Mothers May Share with Young

Children”² are a means to an end and not an end in themselves. *The end product in any creative process is never as important as the process involved in doing it.* It is one of the aims of people who wish to cultivate this quality of intelligence that the child becomes more creative regardless of the particular phase of his thinking and behaving that is involved.

CHILD-CARE EQUIPMENT

In the area of child-care equipment for physically handicapped mothers, Neva Waggoner, the research coordinator of the Handicapped Homemaker research project prepared a bulletin called “Child Care Equipment for Physically Handicapped Mothers.”³

Sometimes the mother lacks the necessary confidence to assume the responsibility. Certainly she cherishes the opportunity to try. Fitting child care into busy schedules which may include therapy and forced rest is difficult. The choice may have to be made between child care or the housekeeping chores. If one has to make this kind of a choice, the general assumption would be that it would be easier and better to have someone do the housekeeping chores, and for the care and the guidance of the child to be under the mother’s supervision in order that she can build the foundation for future co-operation.

It is important that the handicapped mother begin the care of her baby as early as she possibly can. The child himself will adjust to the mother’s difficulty and limitations. He will learn to cooperate by holding on to her if he feels insecure, by raising his body for diapering, and by leaning over her for balance while being dressed, or by holding still for a little longer. The handicapped mother must establish this cooperation as early as possible, for without this relationship, she may find care for a growing child most difficult and frustrating.

The equipment that the mother needs to have should not be a major purchase, as infancy and its care are of a transitory nature. The child does not remain an infant the rest of his life and soon outgrows the equipment. In selecting the equipment, these questions could be considered:

1. Is the equipment manageable within the mother’s physical limitation?
2. Is it easily adjustable in height?
3. Can it be moved easily?

² Jessie S. Wall. University of Connecticut Handicapped Homemaker Research Project.

³ Child Care Equipment for Physically Handicapped Mothers, Neva R. Waggoner, Research Coordinator of the Handicapped Homemaker Research Project at the University of Connecticut, and Garland W. Reedy.

4. Does it have easily manipulated controls?
5. Is it suitable for more than one use and over a long period of time?
6. Is it sturdy and durable?
7. Is it adapted to the rapid growth of the child?
8. Is it easy to care for?
9. Does it promote early independence in children?
10. Is it safe for both mother and child?

After this kind of a procedure has been established, the mother can work out the adjustments that need to be made. These alterations are suitable to many kinds of equipment already on the commercial market. These will meet the needs of the young child and the physically handicapped mother. Purchase should be limited to those pieces of equipment which are essential. Many examples of these things are listed in "Child Care Equipment for Physically Handicapped Mothers."

The University of Connecticut project was concerned with whether or not it would be possible for a child to dress himself completely at an earlier age than had normally been expected of children. It was found that he would with certain types of clothing (large buttons being in the front, removal of strings, wash-and-wear fabrics, one-piece (easy-to-get-into-garments), and certain other features that are contained in the bulletin "*Easy to Care for Clothing for the Preschool Child*." ⁴ Eleanor Boettke wrote this material, and the ideas were given to commercial manufacturers to be incorporated in producing children's garments.

Many garments were designed and laboratory tested in the home by physically handicapped mothers.

It is possible within certain limitations to push back the time at which a child can dress himself if the mother furnishes him with the organization of where things are stored (color will be an easily recognizable clue) and by using care in the selection of the clothes that are already made commercially.

However, there is no way to go beyond the limit of toddlerhood. (A six months-old baby can not put on his own diaper, and the infant can not dress himself). The limit of the time in which a child can do any of these procedures should be the earliest possible time he can accomplish the task. It will not in any way hurt him to dress himself. There may be a time when he will put something on backwards or he will make a selection that is not within what the mother feels is appropriate. For example, he may decide to wear one red

⁴ A set of posters that points out features showing relation of child-care, clothing, and equipment were also prepared at the University of Connecticut center.



WRAP-AROUND SKIRT ELIMINATES OVER-THE-HEAD AND STEP-INTO DRESSING

Institute of Physical Medicine and Rehabilitation, New York, Photo

sock and one blue sock, but he still has his socks on (which is the important thing). Many adaptations have been made in this area.

Diapering was studied carefully since many mothers have difficulty with safety pins. Velcro on a diaper is a splendid idea for women with hand limitations. However, the Velcro must be closed if the washing machine is not lint free, because lint gets in this type of closure and makes it difficult to close. Snaps, grippers, and hooks were the easiest methods of fastening the diaper. Many of these diapers are commercially made.

CLOTHING FOR THE PHYSICALLY HANDICAPPED 1937-1962

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ONCE UPON a time, a beautiful young lady was invited to go to a fancy dress ball. Since a Greek Revival was in vogue that year, our heroine decided to go to the party as the goddess Venus. She wrote a letter to Browns, the costumers, asking them to send her a suitable costume. The following day, a brief reply arrived. "Dear Madam," it read: "... regarding your request for a costume for Venus. There isn't any. Yours sincerely, Browns."

1930-1940

There wasn't any. This classic little story can be applied in several ways to the history of clothing for the handicapped. In the first place, 25 years ago there wasn't any. Women whose proportions differed from the normal struggled to adapt regular paper dress patterns to fit their needs. Men had an even worse time having alterations done in ready-made clothing, only a small percentage of them being able to afford expert tailoring.

Clothing adapted to help the parent dress the child. A few imaginative parents devised methods to help themselves dress their severely handicapped children. Mothers and grandmothers who could sew made dresses and nightgowns that opened all the way down the front or back with buttons and buttonholes at close intervals. This simple adaptation does not seem to have been carried over to slips or other underwear.

Although zippers for home sewing had been put on the market in 1927, most garments were still fastened with buttons, hooks and eyes, or snap fasteners. The first jacket zippers came out in 1930 but it was several years before they really caught on. At least five years later the affluent parents of one boy with cerebral palsy, who carried his arm in full extension at both shoulder and elbow, were able to procure an extra long zipper and have it set into their boy's leather jacket running all the way from the cuff to the waistband. This was such an innovation at the time that it drew appreciative comments even from the therapists responsible for teaching dressing. When *Woman's Day* came out in 1947 with a *How-To* for putting zippers in children's snowsuits so that they could be opened out flat, this was still considered news. (1)

Zippers were put into children's garments commercially in the early thirties mainly for the purpose of making self-help easier for the child, but their first use for handicapped children appears to have been to make care of the child easier for the parent.

Dressing techniques and equipment. During the late thirties there was considerable effort on the part of therapists and some special education teachers to work out techniques and equipment for teaching handicapped children to dress themselves. Much of this originated in centers for treatment and education of the cerebral palsied, since training in all types of self-help was the primary function of the occupational therapy department in these programs.

Adaptations were made of the standard Montessori material in order to teach buttoning, bow tying, and other fastening. A large wooden shoe with rigid sides, into which a child could place his whole foot and a leather practice shoe which could be clamped to a table were designed at the Children's Rehabilitation Institute in Baltimore as special equipment to start teaching shoe lacing (2, 17). Methods were devised for children with flail arms to slip into their jackets and for children with various types of contractures to put on theirs. (3)

The *Cerebral Palsy Round Robin* was started at Riley Hospital in Indianapolis and circulated among the then existing cerebral palsy programs (4). Ideas, drawings, and instructions were collected for all types of self-help, including dressing. The material was compiled and until recently was on loan from the American Occupational Therapy Association. Since cerebral palsy is not one condition, but a complex of disabilities differing widely in their physical effects, this resource contained much information also applicable to the dressing difficulties of children and adults with polio, strokes, severe arthritis, and other disabling conditions.

From the early forties on, there was a steady stream of articles in the textbooks and professional journals in which dressing was at

1940-1950

least mentioned. Although the approach at first was spotty, with the main emphasis on the problems presented by fastenings, progress was taking place. Therapists in rehabilitation centers were gathering information and developing new ideas, while refining their teaching techniques and improving dressing methods. Several articles on dressing written by therapists and geared to parents appeared in the *Crippled Child Magazine*, formerly published by the National Society for Crippled Children and Adults (2, 5)

By 1947, in *The Cerebral Palsied Child and His Care in the Home*, prepared for staff education for nurses engaged in orthopedic public health nursing, there is a section entitled "Dressing and Self-Help Clothes," where teaching methods, dressing techniques, selection and adaptation of clothing and underclothing all receive attention. (6)

Children and their clothing. At various universities and colleges, during this time, research was going on in the field of normal child development and studies were being started relative to fabrics and to the design of children's clothing. However, in 1946, in an otherwise excellent manual for parents of a child with cerebral palsy, we find the oversimplified statement "He should start with the easiest and learn gradually all the techniques of dressing and undressing." (7). Actually, 17 years ago, only certain professional people and a very few educated parents were sure what was "the easiest" when it came to a child's dressing himself.

Although there was some excellent material available on child development in general, until Gesell's work started to come out there was really nothing on children and their clothing that was in any way specific enough to be useful to the occupational therapists concerned with these problems.

When *Infant and Child in the Culture of Today*, *The Child from Five to Ten*, and *Developmental Diagnosis* appeared, these books were a godsend (8, 9, 10). For the first time, a reliable norm was readily available with which any child's dressing ability could be compared. The publication of Gesell's developmental schedules opened up wider interest in the sequence in which dressing skills could be learned, and encouraged more accurate thinking about children's dressing in all its phases.

1950-1955

Activities of daily living. During and immediately after World War II, work was carried on at the Institute for Crippled and Disabled in New York City which started the development of an objective scale for rating the orthopedically exceptional in the physical

demands of daily life, now called ADL (activities of daily living) (11, 16). One of the earliest daily activity record blanks, first published in 1945, contained, among its 100 items, four on dressing and undressing.

The use of such rating scales, which measured both speed and skill, brought about some hard thinking concerning the difficulties of dressing and the amount of time involved with clothing. We now find a shift in emphasis: this time, on specific selection of suitable garments for each individual with a handicap.

Discriminative choice of garments. In a 1950 report following an evaluative study of 47 children in the New York State Cerebral Palsy Program, the following comments appear:

Dressing and undressing have been outstandingly difficult. These activities require considerable coordination. A very great difficulty, however, is the unsatisfactory clothing—fastenings which do not fasten; shoestrings that are too short and often untipped, tearing at the least force; overalls and suspenders that are too tight and do not hook or stay hooked; buttons on trousers which are so small as to defy buttoning, or which have buttonholes which do not permit the entrance of the buttons; long underwear, buttoning in the back with tiny ineffectual buttons; dresses with minute buttons at the top of a tight neckband; slipover sweaters, often too small, in layers . . . (12)

Why not capes, instead of layers of tight turtle-neck sweaters? Why not sturdy, diaper-like pants with snaps, instead of flimsy ones which get torn being pulled off and on over braces? Why not wrap-around skirts, or culottes, instead of tight overalls or slacks? Why not ski pants that zip up the sides? Why not dresses and blouses with zippers or large buttons and buttonholes in the front, rather than unreachable ties and microscopic buttons in the back? Why not narrow bands with buckles on braces, instead of wide bands with laces? And why not shorter hair on those who cannot manage their own, instead of long curls which get tangled up in the sweaters, bibs, slings and back braces? (13)

In *Occupational Therapy Principles and Practice*, 1950, we read:

Careful selection of the child's clothing is necessary. Boys can wear loose collared sport shirts instead of the usual starched front type. Girls can wear jumpers over loose fitting blouses and still give a good appearance. Zippers should be put in wherever possible. It is always fair to give the child as many substitutes as necessary, for this will increase his independence and his motivation. The child's wardrobe should be selected with this in mind so that he may be encouraged daily to do the things he has already learned to do. (5, 17)

Here, although our goddess Venus' little cupids must wear some clothing, we begin to perceive real concern over the question: "What kind of clothing do we choose?"

A-JOT article on dressing. Not until 1954 was a definitive article published on dressing alone. In that year the occupational therapists in and around New York City gathered existing information and combined their knowledge to produce a two-part article in the

American Journal of Occupational Therapy, entitled "Dressing Techniques for the Cerebral Palsied Child" (18). The first part gives the normal sequence in which dressing skills are acquired, tells how to plan the program for teaching dressing and describes special techniques for undressing and dressing. At the end there is a section on braces.

The second part discusses fastenings in detail, including laces, bows, buttons, buckles, and miscellaneous fastenings such as grippers and zippers. In conclusion a list of suggested special clothing is provided. The final paragraph urges a realistic evaluation of what is best for the individual.

Clothing charts. In 1950, the University of Connecticut developed a chart, "Children and Their Clothing," which was designed to help parents relate child growth and development to selecting children's clothing and to teaching a child to dress himself. It covered the age group 1½ to 9 years and outlined the topics: (1) Physical Growth, (2) Coordination, (3) Senses, (4) Play, (5) Achievements, (6) Clothing Principles. This chart proved so useful that it was reprinted in 1954, at which time its sequel, "Girls from 9 to 13—Their Clothing Abilities" was brought out. (19, 20)

Written for 4-H Club leaders, this second chart sets up in parallel columns the characteristics, interests, and skills of girls in the specified age range, using slightly different headings: (1) Physical Development, (2) Coordination, (3) Senses, (4) Abilities, and (5) Principles. It is a valuable resource for those attempting to help any girl of this age who has a residual handicap and who will be obliged to create or remodel her clothing for the rest of her life. Although neither of these charts mentions the child with a handicap, both of them are valuable adjuncts to teaching dressing to any child.

Thus we gradually see the literature not only building up an understanding of the need for careful choice of clothing, but also containing recommendations regarding what types of garments to choose to solve specific clothing problems.

1955-1962

Sunnyview. With various changes of personnel, the special work on clothing that had been started at the Institute for Crippled and Disabled was moved to the Eastern New York Orthopedic Hospital-School (Sunnyview) in Schenectady, New York, and to the Institute of Physical Medicine and Rehabilitation in New York City.

The contribution of the Sunnyview group to alleviating the difficulties of dressing may be summarized in their phrase "Fashion through simplicity." The emphasis here has been: As few pieces of clothing as possible and no fastenings that are not absolutely necessary. (12, 13)

This group has also brought attention to the importance of the proper selection of clothing for the handicapped in the vocational area. (14)

Self-help devices. Over the years, one of the centers most concerned with problems of self-help was the Institute of Physical Medicine and Rehabilitation. This continuing interest led, in 1950, to the inauguration, under National Foundation sponsorship, of a worldwide project to search out, receive, evaluate and publish ideas on self-help devices. The article "Ideas for Independence" from the *Crippled Child Magazine* presents the rationale for using new ideas to replace human energy with mechanical assistance. (21)

Although clothing was included, only incidentally, in the Self-Help Devices Project, many suggestions turned up for special garments, for special adaptations of garments, and for assistive devices to enable patients to dress themselves. The material collected was studied, refined, and made available in several forms, including the well-known loose leaf report, "Self-Help Devices for Rehabilitation." (22)

The service formerly provided by these reports is now being continued under a grant from the Arthritis and Rheumatism Foundation in the monthly leaflets, "Device News." (23)

Functional fashions. Interest in clothing for the handicapped was now growing so rapidly that a special Clothing Research Project was set up at the Institute to study the handicapped and design garments to meet their needs. This produced the "Functional Fashions" on exhibit at the workshop.

Concurrently, a non-profit corporation, Clothing Research, Inc., was formed to sponsor the manufacture of the garments that were originated in the study. Several of the garments thus designed were made up, and a successful market test was carried on through one of the large mail-order houses. When the field test was completed, the clothing was taken off the market, but the ideas continued to be publicized widely.

The work started at the Institute is now being carried on through the newly established (1961) Clothing Research and Development Foundation. The purpose of this independent Foundation is "to research, design, develop and promote clothing that will make it possible for the physically handicapped to dress themselves without aid—or with minimum aid—and that will make it easier to dress those who are dependent on others." (24). The Foundation is bending every effort to put these excellent garments back in the open market where their usefulness has already been proven.

In 1961, the Institute, aided by a grant from the Vocational Rehabilitation Administration, published its report: *Functional Fashions for the Physically Handicapped* (25). This contains informa-

tion on clothing principles, discusses men's, women's, and children's garments and accessories, presents material on fasteners and fabrics, and gives sources of supply and instructions for the care of clothing. It also includes the data on the entire clothing study as conducted at the Institute of Physical Medicine and Rehabilitation.

Clothes for the physically handicapped homemaker. During the late fifties, the clothing and housing research division of the Institute of Home Economics in the Agricultural Research Service of the U.S. Department of Agriculture initiated a study "for the purpose of developing functional clothing to meet the everyday needs of homemakers who have ambulatory handicaps." In the first phase of the study, 70 handicapped homemakers were interviewed and the results reported in "Clothing Needs of Physically Handicapped Homemakers." (26)

The second phase of the study was to develop everyday, at-home clothing based on the principles established by the interviews. These are discussed in "Clothes for the Physically Handicapped Homemaker with Features Suitable for All Women," published as Home Economics Research Report No. 12 (27). This lists comfort, convenience, safety, protection, serviceability, fabrics with functional qualities and last but by no means least, the fact that clothes should have lines that flatter and colors and patterns that give pleasure. It then goes on to describe and illustrate the garments and accessories that were developed. In addition to making a successful attack on the clothing problems of this category of women, they have also achieved their goal of designing special features that are of interest to able-bodied homemakers "who want clothing that is comfortable to work in, easy to take care of, and attractive to wear."

Self-help clothing for handicapped children. The two projects just described were mainly concerned with clothing for adults, although there is a chapter on children's clothing in "Functional Fashions" (25). Last year, however, a study was reported where the research was done solely on the clothing and dressing problems of children. This was a collaborative project of the University of Connecticut, the Hartford (Connecticut) Rehabilitation Center, and the Connecticut Society for Crippled Children and Adults, under the auspices of the National Society for Crippled Children and Adults. Research costs and the publication of the report were covered by a grant from Zeta Tau Alpha, a women's sorority.

The results of the study have been published in an 80-page booklet, No. 10 in the National Society Parent Pamphlet Series, entitled "Self-Help Clothing for Handicapped Children." (28)

A questionnaire was distributed to the parents of physically handicapped children between the ages of 3 and 16 years. With information added from other sources, the answers provided an excellent

analysis of present-day children's clothing correlated with physical handicaps.

The illustrated pamphlet describes major clothing problems in simple terms and recommends many possible solutions. Since the upper age limit was 16 years, a good portion of the suggestions are also applicable to adults.

The first chapter deals with child development and furnishes a useful guide to the sequence in which a child usually learns to dress. Chapter two is the meat of the book. It recommends that parents analyze their children's needs and then shop for clothing features to meet these needs rather than for specific styles which may change from time to time. Many of the required features will reappear each year but in a different style. The booklet describes what these features may be under the headings of: Easy-on Easy-off, Easy Fastening, Comfort and Convenience, Disguising the Disability, Extra Wear, and Easy-Care Fabrics.

In addition, there is a very fine section on sizes, a section on the wear and care of fabrics, and a final chapter on training for independence (for which an occupational therapist served as consultant), in which the necessity for becoming "motion minded" is pointed out. Principles of teaching dressing are listed and special dressing techniques are delineated. This is followed by a detailed discussion of fastenings and a short bibliography.

Child care for handicapped mothers. Several years earlier, the University of Connecticut engaged in a study on Work Simplification in the Area of Child Care for Physically Handicapped Women, sponsored by the Vocational Rehabilitation Administration. One of the several publications that came out of this was "Suggestions for Physically Handicapped Mothers on Clothing for Pre-school Children" (29). This is discussed in the Child Care paper by Jessie Wall.

It should be borne in mind, however, that if a garment is easy for the mother to put on the child, it is quite possible that it may be easy for the child to put the garment on himself. This booklet should, therefore, not be overlooked as a possible resource.

Special publications. In addition to those resources which have a general application, there are several good references which include clothing from the point of view of one particular group or stress a particular factor. Among these are:

1. Growing Up: *Cerebral Palsied* Children Learn to Help Themselves. National Society Parent Pamphlet No. 7, Mildred Shriner. (30)
2. Dressing Techniques for the Severly Involved *Hemiplegic* Patient. A-JOT Reprint. Gladys Brett, OTR. (31)

3. Physical Medicine and Rehabilitation for *Arthritic and Rheumatic* Patients. Edward W. Lowman, MD (32), and Self-Help Devices: Aids to Dressing. Lowman and Rusk. Rehabilitation Monograph XXI. (33)
4. Getting Acquainted with Your New Armor. Described and edited by Teenage "Veterans of the *Cast*." Distributed by the Kansas Society for Crippled Children. (34)
5. Greenhouse Dress Designs for Children with the *Magic Button*. Whitney and Brett. (35)
6. *Safety* Check List for Parents. *Safety* Check List for the Aging and the Handicapped (and their families). Prepared and distributed by the National Society for Crippled Children and Adults. (36)
7. Toilet Problems of Seven Children with *Spina Bifida*. *Physical Therapy Review* reprint. Brown and Ward. (37, 38)

Perceptual problems. The occupational therapists writing the dressing article for children with cerebral palsy in 1954, which we have already mentioned (18), listed perceptual difficulties as related to clothing as one of the elements to be considered in determining the mental readiness of the child to be taught undressing. In the past generation, much thought has been given to the study of learning in general and the specific learning processes of those with brain injury.

Although the literature on specific dressing techniques for the brain-injured child or adult is so sparse as to be almost nonexistent, there is general agreement among those teachers and therapists who work with these children on certain dressing principles.

The following paragraphs, written by one of the world's leading authorities on the education of the brain-injured child, spell out the modern approach:

We have done little with types of clothing other than to suggest that they be large enough, (especially boots and pants) warm enough, and similar to the clothes worn by his age group in the normal classes within the school. We also suggest that distracting additions such as decorative belt buckles, fancy cleated boots, ties (except on dress-up occasions) bows, ribbons, etc. be held to a minimum.

We encourage parents to make the child independent. This will mean that he should be able to dress himself for school and for outside play. Each child's needs will be different. Some will need the elastic waistband for trousers rather than a belt and zipper. Others will need the T-shirt rather than a buttoned one. Some will need a pull-on cap rather than a parka that ties. Mittens often work better than gloves as there is only the thumb to worry about. The goal is to get the child to be self-sufficient and also to do the things expected and as normally as possible. This means then that buttoning, tying, zipping, etc. should be taught to each child in small doses and

in small steps as he is able to learn them. In other words, we give the child simpler clothing so he can experience success and independence, but we do not forget that, if at all possible, he should conquer the more complicated things in dressing. (39)

"Self-Help Clothing for Handicapped Children" (28), previously described, contains a brief reference to the use of ingenuity in solving problems presented by perceptual difficulties and several teaching devices are mentioned.

Summary

Interest in the clothing problems of the physically handicapped has evolved through several distinct stages during the past 25 years. Seen from the vantage point of today, it would appear that the early efforts toward formal training of children to dress themselves put the cart before the horse, with an overemphasis on fastenings and a lack of imagination on selection of clothing. Actually, as in many other phases of total rehabilitation, empirical knowledge, scientific advances, and technological research have combined to eliminate many of the obstacles to self-help in dressing. Modern fasteners such as the nylon zipper and Velcro (40) have made life easier for all of us. Fashion itself has proved a boon by making popular the principles of fewer garments and those simple and well cut.

We have really come a long way in the last 25 years, but we are not at the end of this road yet. As Muriel Zimmerman says in "Ideas for Independence" (21) "while there are many answers existing already, there are many more to be invented."

REFERENCES

1. How to put zippers in a child's snow suit. *Woman's Day*, Dec. 1947, pp. 8, 9, 65. (Out-of-print)
2. Dillingham, E. Feeding and dressing techniques for the cerebral palsied child. *Crippled Child* 26, No. 4 (Dec. 1948), pp. 20-22, 29.
3. Pohl, J. F., MD. *Cerebral Palsy*. St. Paul, Minn.: Bruce Publishing Co., 1950, 224 pp.
4. American Occupational Therapy Association Committee on Research and Efficiency. *Cerebral Palsy Round Robin Digest, 1938-1941*. New York: The Association, 1943, 55 pp.
5. Brunyate, R. M., OTR. O.T. means freedom for parents. *Crippled Child* 26, No. 5 (Feb. 1949), pp. 11-13, 28-29.
6. Cardwell, V. E., RN. *Cerebral Palsy; Advances in Understanding and Care*. New York: Assoc. for the Aid of Crippled Children, 1956, 625 pp.
7. Hansen, R. *The Parents' Role in the Cerebral Palsy Program*. Los Angeles; Orthopaedic Hospital, 1946, 32 pp.
8. Gesell, A. *The First Five Years of Life*. New York: Harper and Brothers, 1940.

9. Gesell, A., and Ilg, F. L. *The Child from Five to Ten*. New York: Harper and Brothers, 1946.
10. Gesell, A., and Amatruda, C. S. *Developmental Diagnosis*. Second Edition. New York: Harper and Brothers, 1949.
11. Brown, M. E. Daily activity inventory and progress record for those with atypical movement. *Am. J. Occupational Therapy* 4, Nos. 5 and 6, (Sept.-Oct., Nov.-Dec. 1950) and 5, No. 1, (Jan.-Feb., 1951), (Three-part article).
12. ———. Daily activity inventories of cerebral palsied children in experimental classes. *Physical Therapy Rev.* 30, No. 10 (Oct. 1950), pp. 415-421.
13. ———. Fashions for c.p.'s. *Cerebral Palsy Rev.* 12, No. 8 (Sept. 1951), pp. 3-5, 8.
14. Brown, M. E., RPT, and Van Der Bogert, M., OTR. Pre-vocational motor skill inventory; preliminary report. *Am. J. Occupational Therapy* 7, No. 4 (July-Aug. 1953), pp. 153-163, 188.
15. Brown, M. E., RPT. The patient's motion ability; evaluation methods, trends, and principles. *Rehabilitation Literature* 21, No. 2 (Feb. 1960), pp. 46-57; and No. 3 (March 1960), pp. 78-79.
16. Lawton, E. B. *A.D.L.: Activities of Daily Living; Testing, Training, and Equipment*. Rehabilitation Monograph X. New York: Institute of Physical Medicine and Rehabilitation, 1956, 59 pp.
17. Brunyate, R. M., OTR. Occupational Therapy in the Treatment of Cerebral Palsy. Chapter IX in *Occupational Therapy Principles and Practice*. Edited by Dunton, W. R., and Licht, S. H. Springfield, Ill.: Charles C. Thomas, 1950.
18. New York Area Therapists. Dressing techniques for the cerebral palsied child. *Am. J. Occupational Therapy* 8, No. 1 (Jan.-Feb. 1954), pp. 8-10, 37-38; and No. 2 (Part I, March-April 1954), pp. 48-51, 69-70.
19. Moeller, F., and Tingley, K. A. *Children and Their Clothing*. Storrs, Conn.: University of Connecticut, 1950, 1954.
20. ———. *Girls from 9-13; Their Clothing Abilities*. Storrs, Conn.: University of Connecticut, 1952.
21. Zimmerman, M. E. OTR. Ideas for independence. *Crippled Child* 34, No. 5 (Feb. 1957), pp. 7-8.
22. Institute of Physical Medicine and Rehabilitation. *Self-Help Devices for Rehabilitation*. Dubuque, Iowa: Wm. C. Brown Co., 1958.
23. Arthritis Self-Help Devices Office, Institute of Physical Medicine and Rehabilitation. *Device News*. (Monthly publication distributed free on request to physicians and other professional workers.)
24. Cookman, H. Invitation to press conference announcing the establishment of the Clothing Research and Development Foundation, Inc., New York, Oct. 1961.

25. Cookman, H., and Zimmerman, M. E., OTR. *Functional Fashions for the Physically Handicapped*. Patient Publication No. III. New York: Institute of Physical Medicine and Rehabilitation, 1961.
26. Scott, C. L. Clothing needs of physically handicapped homemakers. *J. Home Econ.* 51, No. 8 (Oct. 1959), pp. 709-713.
27. U.S. Department of Agriculture. *Clothes for the Physically Handicapped Homemaker with Features Suitable for All Women*. Home Economics Research Report No. 12. Prepared by Clarice L. Scott. Washington, D.C.: Government Printing Office, 1961, 28 pp.
28. Bare, C., OTR, Boettke, E., and Waggoner, N. *Self-Help Clothing for Handicapped Children*. Chicago: National Society for Crippled Children and Adults, 1962, 78 pp.
29. University of Connecticut School of Home Economics. *Suggestions for Physically Handicapped Mothers on Clothing for Pre-school Children*. Child Care Problems of Physically Handicapped Mothers, Bulletin No. 1. Prepared by Eleanor M. Boettke. Storrs, Conn.: School of Home Economics, 1957, 32 pp.
30. Shriner, M. *GrowingUp—Cerebral Palsied Children Learn to Help Themselves*. Parent Series No. 7. Chicago: National Society for Crippled Children and Adults, 1961, 24 pp.
31. Brett, G. Dressing techniques for the severely involved hemiplegic patient. *Am. J. Occupational Therapy* 14, No. 5 (Sept.-Oct. 1960), pp. 262-264.
32. Lowman, E. W. Physical Medicine and Rehabilitation for Arthritic and Rheumatic Patients. Reprinted from: Steinberg, C. L. *Arthritis and Rheumatism; the Diseases and Their Treatment*. New York: Springer Publishing Co., 1954. Chapter 13. pp. 259-309.
33. Lowman, E. W., and Rusk, H. A., MD. *Self-Help Devices*. Rehabilitation Monograph XXI. New York: Institute of Physical Medicine and Rehabilitation, 1962, 107 pp. Reprinted from *Postgrad. Med.* April 1959-May 1962.
34. Dettle, C., RN, Donaldson, J., and Farney, R. *Getting Acquainted with Your New Armor*. Wichita, Kansas: The Kansas Crippled Children's Commission and the Kansas Society for Crippled Children, 1959.
35. Brett, B. and Whitney, A. *The Greenhouse; Catalogue of Clothes Especially Designed for Handicapped Children*. New York: The Greenhouse, Inc., 6 East 32nd St., New York 16, Summer 1962.
36. National Society for Crippled Children and Adults. *Safety Check Lists: No. 1, for Parents; No. 2, for the Aging and Handicapped (and Their Families)*. Chicago, The Society, 1962 and 1963. Single sheets.
37. Brown, M. E., and Ward, M. M., RN. Toilet problems of seven children with spina bifida. *Physical Therapy Rev.* 33, No. 12 (Dec. 1953), pp. 632-638.

38. Ward, M. M. Self-help fashions for the physically disabled child. *Am. J. Nursing* 58, No. 4 (April 1958), pp. 526-527.
39. Larson, C. E. Personal correspondence with the author. Joliet, Ill.
40. *Velcro Manual; Case Studies, Bulletins, and Reprints*. New York: Velcro Corporation, 1962.
41. American Home Economics Association. *Proceedings of Workshop: Expanding the Services of the Home Economist in Rehabilitation*. Washington, D.C.: The Association, 1960, 100 pp.
42. Judson, J. S., Wagner, E., OTR, and Zimmerman, M. E., OTR, compilers. *Homemaking and Housing for the Disabled in the United States of America*. Rehabilitation Monograph XX. New York: Institute of Physical Medicine and Rehabilitation, 1962, 78 pp.

CLOTHING FOR THE DISABLED

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THE DEVELOPMENT of specially designed clothing as a means of independence for the disabled is well established as a goal of rehabilitation.

At the Institute of Physical Medicine and Rehabilitation adaptation of clothing or special devices to assist dressing have been a part of the program since its beginning in 1950. Efforts in this area, however, were very limited until 1955, when the help of Helen Cookman, a well-known designer, was enlisted. Studies at that time of a random group of 51 patients showed that of all patients entering the Institute 50 per cent still had dressing problems on discharge. The type of clothing that presented problems was not limited to any one kind of garment but pertained to all. An even higher percentage of persons needing assistance was shown by two other studies. The survey conducted by the University of Connecticut in the project on clothing for handicapped children reported that 89 per cent had difficulty with clothing. A survey done by the *Toomey j. Gazette* in 1962 in regard to activity problems and severe post polios reports that 83 per cent (out of 806 replies) had inability to dress themselves.¹

¹ *Toomey j. Gazette*, Fall-Winter 1962.

As a systematic approach to studying the problem in 1955, patients were both interviewed in regard to their difficulties and observed while attempting to perform dressing activities. Problems in regard to each type of garment were isolated and recorded. Taken into consideration were all types of disability problems such as hand and arm weakness, incoordination, loss of range of motion, use of only one hand, etc.

The approach to solutions of the problems was integrated into common needs so that, if possible, each garment designed—or redesigned—would be suitable for many persons and answer many problems. It was felt that only by such an approach could we hope eventually to have clothing manufactured on a wholesale basis and thus made available to large numbers of the disabled.

This same method of study has been used by the University of Connecticut and the U.S. Department of Agriculture as well, and much of this information is available in the literature recorded in the reference list.

If we look at some of the problems that were observed, we find that styles that are easy to put on and take off, like wrap-arounds or two-piece models, are an essential. Fastenings are a major factor and usually a problem on every garment, including shoes and garters for stockings. Provision for freedom of movement during activities of various kinds, and especially when crutches and wheelchairs are used, is more urgent than for the nondisabled, although the active sportsman also experiences these needs. The "golfer" classic is one example. Examples of problems arising from lack of freedom of movement are ripping open of underarm and waist seams, gaping open of necklines, and blouse or shirt tails pulling out of skirts or trousers. Use of wheelchair, crutches or braces also causes wear and tear of fabrics by rubbing or the sharp edges of ends of braces at knee and elbow joints also cause damage. The need of some patients to slide instead of stand when transferring from wheelchair to bed, car, toilet, or other location requires not only freedom of movement, but fabrics that do not stick and skirts with a minimal amount of fabric for easy handling. Incontinence, in some cases, adds a problem of extra care in more frequent washing, and even ordinary laundry may be difficult when physical losses or lack of energy or endurance must be coped with. A careful study of each patient to determine his or her particular set of problems is essential, as well as good motivation and attitude of patient toward having the problem solved. Follow-up with training is also an important element.

Both adults and children are faced with the above problems, and additional ones are added for the handicapped mother when she must manage not only to dress herself but her young children.

Examples of Solutions

A great deal has already been done toward solving many of the problems mentioned. In some instances, standard garments and current styles have been redesigned so as to retain their "normal" appearance, yet eliminate the clothing restrictions or limitations imposed upon the physically disabled.

Other answers have been found by making adjustments or alterations of already existing garments where changes are fairly simple or minimal. In a few instances the proper or careful selection of standard garments may meet the need. On display at the Workshop were some exhibits showing the work that has been done by various individuals and organizations, as follows:

1. *Clothes for the Physically Limited Homemaker*—Textiles and Clothing Laboratory, Clothing and Housing Research Division, U.S. Department of Agriculture, Washington 25, D.C.
2. *Self-Help Clothing for Handicapped Children*—National Society for Crippled Children and Adults, 2023 West Ogden Avenue, Chicago 12, Illinois.
3. *Functional Fashions*—Clothing Research and Development Foundation, 48 East 66th Street, New York 21, N.Y.
4. *Dresses for Handicapped Children*—The Greenhouse, Inc., 6 East 32nd Street, New York 16, N.Y.
5. *Clothing and Equipment Aids*—Items specially designed and manufactured in the workshop of the Vocational Guidance and Rehabilitation Services, Rehabilitation Center, 2239 East 55th Street, Cleveland 3, Ohio. Available from Mrs. Dorothy A. Behrens, Handicapped Clothing Department.
6. *Photographs of Children's Clothing*—Theodora Bryce, Physical Restoration Center, Regina, Saskatchewan, Canada.

Examples of the following types of solutions were demonstrated from among the collection of clothing on exhibit:

1. Two-piece dresses by Helen Cookman and Clarice Scott.
 - a. Functional Fashion suit-dress features inverted pleats in jacket to allow freedom of movement; high-cut armholes and double fabric underneath to prevent tear and wear; large flat buttons on jacket for easy handling; and extra long side-front opening zipper on skirt, with Velcro closure for ease in putting on and taking off.
 - b. Skirt with center-front opening, elasticized webbing waistband, and overshoe-type flip fastener for ease of donning and handling; the blouse featuring inverted underarm seam pleats to prevent tear during reaching; side vents for hip adjustment; slippery lining

below waist to let overblouse slip down after reaching; and snap or pressure fasteners for easy closure.

2. Wrap-around dresses by Cookman and Scott.

a. Functional Fashions coat-dress features extra width across bodice and upper arm to allow freedom of movement and keep proper fit; high armholes and double fabric against wear and tear. Two large hook-and-eye fasteners for easy handling with weak hands or only one hand. Flared skirt with slight fullness covers braces and is graceful, yet not bulky or too much fabric to handle. Slight shortening of lapping corners keeps hemline even while sitting.

b. Year-round dress features three-quarter length front opening for ease in putting on and taking off, skirt with easy fullness, waistline with elasticized back for fit and comfort and special feature at side of waist to open as arm is raised and close when arm is lowered; raglan sleeve with underarm extension to provide "give"; and neckline with low rolling collar that does not ride up.

3. Slacks for men, women and children.

Assets are full-length side seam zipper with two-way slide action. Opening from bottom allows easier putting on and taking off over braces, as well as removal of braces while wearing slacks without complete undressing; a half-belt which permits use (with the zipper) of a "drop-front" or "drop-back" without losing garment, even when standing.

4. Shirts with Velcro closure eliminate the need to manage small or difficult buttons or snaps.

5. Undershirts with no underarm seam provide more armhole stretch and ease of pulling on.

6. Aprons with plastic waist hoops eliminate tying, and the *apron for wet lap work* has a corded rim which keeps water from running off on clothing and parings or small articles from sliding off lap.

7. A blouse which opens completely flat and need only be placed "around" a person makes dressing easier. The back of blouse has bottom side "tails" which wrap around in front and close with Velcro. Blouse front and side openings also are closed with Velcro. (Vocational Guidance and Rehabilitation Services, Rehabilitation Center.)

8. Wrapper-back slip (Vocational Guidance and Rehabilitation Services). A half-slip with elasticized waistband has a back opening of lapped panels. Top panel is faced on the outside with terry cloth for added protection.

9. Many self-help features on children's clothing have been recognized and selected by the two studies done at the School of Home Economics, University of Connecticut, in order to help both the handicapped child and the handicapped mother. Also studied were growth problems, comfort, wear, "easy care" features and perceptual problems.

a. Overalls, dresses, skirts and snowsuits with full-length center front openings are easier to put on and take off.

b. Over-the-head type openings or expandable necklines are also easier to put on.

c. Easy fasteners are large buttons with long thread shanks, large grippers, large trouser type hook and eye, zippers with pull tabs and placed in easy-to-reach locations make self-help easier and lessen mother's problems as well as the child's.

d. Raglan or kimono sleeves are easy for the nondisabled child to slip hands and arms into. They may be hazards for the handicapped child who use crutches.

e. Growth problems are more easily managed by selecting styles with no waistlines or with vertical or horizontal tucks to let out; also wide hems and adjustable shoulder straps.

f. Wear and care are made easier by selection of sturdy fabrics, which are provided by types of yarns and weaves as well as the new synthetic fibers.

10. Another approach to suitable children's clothing has been made by Betty Brett:

a. Self-help features are: long front openings, washable, sturdy, easy-to-care-for fabrics that are machine washable and require no—or little—ironing. A new and unique fastening is the magnetic button.

The literature from all the studies mentioned gives more complete details and illustrations of clothing for the physically handicapped.

Another problem of extreme importance is the eventual availability of clothing. Some items are on the market, and it is expected that with time more will be. The future depends on several factors. Both designers and manufacturers must be interested and convinced that not only is there a demand and a sizable market for such clothing, but that many of the solutions shown here will make clothing more convenient and comfortable for anyone.

Through the efforts of the Clothing Research and Development Foundation, Inc., a non-profit organization founded by Mrs. Helen

Cookman, the following designers have agreed to put Functional Fashions in their line of clothing:

Currently: (1) Vera Maxwell—a 4-piece outfit.

(2) Pauline Trigere—afternoon dress.

(3) Capezio—afternoon shoe.

Spring: (1) Alexander Shields—men's sport jacket and terry bathrobe.

(2) Bonnie Cashin—silks.

(3) Scaasi—children's dresses.

Fall: (1) Joseph Love—children's dresses.

(2) Abe Shroeder—all three departments.

It is anticipated that the dresses designed by Betty Brett will be manufactured in the near future.

One design from the clothing by the U.S. Department of Agriculture (Clarice Scott) is available in pattern form from Reader Mail, New York City. The high-bib and low-bib aprons also shown in this project have been made available in pattern form by Mrs. Marion Melrose, Agricultural Extension Service, University of Minnesota (St. Paul 1).

Another problem needing further consideration is how and where such clothing should be sold. To date it would seem that many sources, such as mail-order houses, department stores and special shops all are needed in order to serve and reach all types of consumers.

And finally, public opinion regarding the fact that the disabled are no "different" from ourselves and that their presence is acceptable must be achieved before either design or source of supply will be truly adequate.

HOME MANAGEMENT RESOURCE MATERIAL AND NEEDS

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MY DISCUSSION of home management resources and needs relates to my experience as a home economist in the area of homemakers rehabilitation in the State of Michigan. It will also in-

clude my interpretation of what is involved in the rehabilitation of the physically handicapped in homemaking activities.

The Michigan program that I have worked with for 12 years was initiated by the Michigan Heart Association. The Association's view is that homemakers rehabilitation is essentially home management; therefore, the organization worked out a cooperative arrangement with the Department of Home Economics at Wayne State University in Detroit, that resulted in a city-wide project. A similar plan with the College of Home Economics at Michigan State University resulted in a state-wide Homemakers Rehabilitation Program. Both programs were made possible by a financial grant from Michigan Heart Association and, at each institution, a home economics staff member was assigned to teach home management principles with emphasis on work simplification to classes of homemakers, adapting this information to meet the needs of the cardiac homemaker. These two separate projects proved so effective that at the end of a 10-year period the Michigan Heart Association terminated the financial grants to the universities and established Homemaker Rehabilitation as a direct service of its own organization.

As a member of the staff of Michigan Heart Association I consider my assignment essentially the same as it was as a member of the home management staff of Michigan State University—that is, to help the disabled homemakers throughout the state to do the best job of homemaking possible within the limits of their disabilities.

To carry out this assignment three programs have been developed.

1. Homemakers rehabilitation information is presented to groups of professional persons and students, whose profession includes work with the disabled homemaker but who do not have home management in their professional training.
2. Classes in home management and work simplification are offered to disabled homemakers and other interested persons.
3. A series of home visits are made to a limited number of disabled homemakers upon physicians' request or referral.

Even though this Michigan program is pointed specifically to meet the needs of the cardiac and stroke patients, these two kinds of patients represent a classification of kinds of disabilities regardless of the cause of the handicaps. There are those who have a hidden disability where limited energy is the main problem, whether this person is a cardiac, one with arrested tuberculosis, or one with some other energy-limiting disability. There also is the person who has

an obvious physical limitation, whether the patient has had a stroke or is physically limited from some other cause.

My interpretation of homemakers rehabilitation is that it is essentially home management. In its broader meaning home management is making the best use of family resources to achieve the best kind of home life possible.

In this age of specialization home economics considers these resources separately and we find the home economist as a specialist in child care, family relations, textiles and clothing, nutrition, housing, equipment or home management.

My special training has been in the field of management concerned with doing the specific jobs in the home. In applying management principles to homemakers rehabilitation the disabled homemaker must be helped in working out better ways of doing her many household activities considering special adaptations because of the nature of her handicap and her particular family situation. This kind of help is a very important segment of vocational rehabilitation.

Rehabilitation is not the responsibility of a single professional group. The ideal concept is that rehabilitation results are best accomplished when there is a professional team headed by a physician. In practice, however, one professional person only may be called upon to work with the disabled homemaker without the support of other team members. This person may be the physician, a social worker, an occupational or physical therapist, someone from the nursing profession, a rehabilitation counselor or a home economist.

The home economist working directly with disabled homemakers must be medically oriented and those from the medical and paramedical professions may be lacking in homemaking information. Therefore, the major role of the home economist in homemakers rehabilitation is that of a resource person to those who in their professional training have not received adequate instruction in such home economics subjects as food preparation, nutrition, clothing and textiles, family relations, child care, housing, equipment and home management.

Reference Materials

A good list of references in this area of rehabilitation can be found on page 211 of the *Proceedings of the Workshop on the Rehabilitation of the Disabled Homemaker* held at Michigan State University in 1961.

In this list one that refers specifically to home management is entitled "A Bibliography on Home Management with Emphasis on Work Simplification for Handicapped Homemakers." This comprehensive publication lists a wide variety of references relating to

home management with applications to the performance of the many homemaking tasks. It also points to the dearth of publications prepared to meet the specific needs of the disabled homemaker. Many of the most useful bulletins and pamphlets listed were prepared and published by the United States Department of Agriculture and by the different land-grant universities and colleges. In every State, there is such a land-grant institution with a Cooperative Extension Service that works in cooperation with the USDA. Their publications provide one of the best sources of current and authentic home-making information.

From this list of references a very few publications could be selected to start a "ready reference" shelf or file. A good beginning would be the University of Connecticut's "Home Management Bibliography," already mentioned.

Next I would suggest two books:

The first, a reliable, yet practical college level home management text: Gross, I. H., and Crandall, E. W., *Management for Modern Families*, New York: Appleton-Century Crofts, Inc., 1954. The second edition of this text will be available in the late spring of 1963.

The second is an authoritative book that discusses management principles with their application to the various activities of home-making. It also considers the special problems of the handicapped homemaker:

Gilbreth, L. M., Thomas, O. M., and Clymer, E., *Management in the Home*, New York: Dodd Mead & Co., 1959.

Two bulletins are recommended:

First, *Management Problems of Homemakers Employed Outside the Home*, United States Department of Health, Education, and Welfare, Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1961. Although this publication addresses itself to the employed homemaker it is useful as a general home management reference.

Rusk, H. A., MD, and others. *A Manual for Training the Disabled Homemaker*. Rehabilitation Monograph VIII, New York: Institute of Physical Medicine and Rehabilitation, New York, University Medical Center, 1961. This is a most useful manual when working with physically limited homemakers.

Some publications describe rehabilitation programs for the handicapped homemaker in other countries:

The International Society for the Rehabilitation of the Disabled Conferences on the Physically Disabled and Their Environment is a

report of the proceedings of a conference held in Stockholm, Sweden, in 1961.

The Physically Handicapped Housewife—SVCK's series No. 6 gives a clear picture of the problems of the disabled homemaker in Sweden in relation to work in the home and offers helpful suggestions.

These two publications in English indicate the international aspects of rehabilitation and provide useful information on the needs of the handicapped homemaker in the performance of housework.

It is my belief, after visiting homemaking rehabilitation centers in seven different European countries, that there is much that can be learned from their practical approach to helping the disabled homemaker in the performance of homemaking activities and in achieving the maximum of independent living.

Films

Two 16 mm sound color films useful in teaching classes of professionals or professional students are available from the University of Connecticut. They are:

Where There's A Will is useful to introduce the subject of rehabilitation of the homemaker to professional groups such as classes for student nurses. This film does an excellent job of outlining such important aspects as the importance of motivation, the attitude of the family members toward the disability, the patient's acceptance of her disability, her competency to render community service, and the importance of the planning aspect of home management. A portion of the film shows different handicapped homemakers, working in the kitchen, hanging clothes, caring for young children, cleaning, participating in community activities and engaging in recreational pursuits. I particularly like to use this film because it is opened and closed with comments by Lillian Gilbreth, who has been an inspiration to so many of us in rehabilitation work.

Principles of Motion Economy Illustrated by Handicapped Homemakers, is useful with class groups that are already rehabilitation oriented, but who are specifically interested in home management and work simplification. Each semester I present a class series to the senior occupational therapy students at Western Michigan University and I find the use of this film a very good way to introduce work simplification. A second specific interest of these students is kitchen planning. From this film I progress to the application of the principles as they relate to kitchen planning for the disabled homemaker as well as to the planning of a kitchen unit of a rehabilitation center.

A collection of 2 x 2-inch colored slides that relate to a specific

subject matter can also be a useful home management resource. It has more flexibility than either a 16 mm film or filmstrip. I have used such slides effectively in teaching laundry procedures but because there is more interest in work in the kitchen, I have used slides most extensively in group teaching of kitchen planning, arrangement, storage and working procedures. Such slides can be used to introduce and illustrate the principles of kitchen planning and then other means can be employed to develop the subject further, when teaching either professional or homemaker classes.

I have collected my kitchen slides from a variety of sources but a set that is available illustrates the *Beltsville Energy Saving Kitchen, Design No. 1 with Work Room*. There is also a descriptive leaflet No. 416 with the above title. These pictures may be obtained as filmstrip No. C-58 from the U.S. Department of Agriculture, Office of Information, Photography Division, Washington 25, D.C.

Equipment and Tools

Household equipment and tools are important in helping the disabled homemaker in job accomplishment. When working with the homemaker in her home, I try to show her how to make the best use of what she has, but when it is important that she should have additional equipment or tools I try to help her in making the best choice that is possible for what she can afford.

For class groups, collections of small equipment and tools make effective teaching aids for particular homemaking activities. They can be assembled in separate fiber carrying cases and thus are always ready when needed. I use equipment when I teach principles of body use as they relate to the best use of energy, reducing of tension and fatigue and working with maximum comfort. I point out the importance of sitting for some kinds of housework, but stress that to obtain maximum advantage one must consider the type of job, the work center, the importance of using the right kind of chair and having the correct relationship of the seated worker to the work counter. An inexpensive chair and an improvised work counter can be used to demonstrate the correct seating position. Often a family member can duplicate this equipment with a minimum of skill, effort and expense. In the same way, a folding porch chair and a foot rest can be used when teaching the importance of short periods of rest and relaxation, to demonstrate how to make the best use of such time.

Certain tools and equipment are especially important resources when working with particular disabilities. The Arthritis and Rheumatism Foundation has circulated, over a period of years, a series of

printed sheets that either diagram or illustrate useful devices and equipment. Often these items can be adapted for use for those who have disabilities other than arthritis or rheumatism. The use of a particular tool even if sometimes used in a different way than used by the normal homemaker, may make the difference as to whether a disabled homemaker can perform a variety of homemaking activities. This can be illustrated when considering the problem caused by the one-handedness of the stroke patient in performing some simple kitchen activities. A peeling board with an arrangement of nails in it can hold food for cutting and peeling. Another type of board with a round opening to hold a mixing bowl can be designed to fit over an opened drawer for the standing worker, or to fit over the arms of a wheelchair for a wheelchair patient. A wall-type jar opener can be used to open or tighten screw top jars. A wall can opener can be mounted on the wall in such a way that it can be used with a minimum chance of accident and there is a table type can opener that can be operated with one hand. Vacuum cups will secure vegetable or bottle brushes for one-handed use. The French type whip can be used with one hand and there is the kind of egg beater and food slicer and grater that can be held by the chin. Reaching devices in variety have particular uses and there are other tools that help when dishing up food with one hand. There are also kitchen storage devices that are of great help to the person with body limitations for placing tools, equipment and materials where they are easy to see, reach or grasp.

Dissemination of Information

Television and radio stations may be excellent resources for the distribution of general homemakers rehabilitation information as well as for the teaching of how to perform particular household activities. Stations are receptive to offering class series pointed to meet the special interests of the disabled homemaker. Such presentations are effective in providing a limited amount of information to a great many people.

Business organizations and public utility companies can also be considered as home management resources. Companies that manufacture or sell home equipment or appliances or that distribute gas or electricity may employ home economists who often have had special training in home management. Such company personnel are usually willing as well as qualified to assist in some aspects of programs for the disabled homemaker. The companies they represent are likely to have public service policies that result in support to such programs in a variety of ways.

The final resource I want to mention is the university or college

that has a department, school or college of home economics. Such institutions are usually qualified to give home management training on the undergraduate or graduate level as well as to sponsor special short-term workshops or institutes. I have already mentioned the land-grant institution as a literature resource but it is especially well qualified to offer home management training as well. In addition each has a Cooperative Extension Service through which home economists are stationed throughout the State, usually at the county seats. They are called home demonstration agents or county extension agents in home economics. Their assignment is to offer a variety of services to the homemakers in the counties where they are located and they usually prove to be excellent cooperators and resource persons.

Rehabilitation Needs

In discussing rehabilitation needs in relation to home management I would like to point out the importance of training opportunities for those working with handicapped homemakers. There should be opportunities provided for the home economist to receive medical orientation and opportunities for those from paramedical professions to receive training in the home economics subject-matter areas that are important to help the disabled homemaker carry on her vocation of homemaking most effectively. To provide this kind of training, there will need to be curriculum changes and additions at the institutions where professional training is given. In addition, short-term workshops and training institutes should be held to give practical home management and work simplification information with application to the specific problems of the handicapped homemaker.

A second need is research—for example, research that relates to the measurements of energy costs. There are many kinds of disabilities where energy limitations are an important consideration. This is true for cardiac homemakers who make up the largest segment of the disabled homemaker population.

Dr. Edward Gordon, Director of Physical Medicine, Michael Reese Hospital, Chicago, has published classifications of effort, expressed in terms of calories per minute, for light work, medium work and work with no restrictions. He has also listed energy costs for a variety of activities. The list of housework tasks shows how very little has been done in measuring housework activities in terms of energy costs. In addition, if such information is to be of any use to the patient, she must know the way the job was done when the energy costs were determined.

Recent research relating to energy expenditures, *Expenditures of Women Performing Selected Activities*, Home Economics Research Report No. 11, Agricultural Research Service, United States Department of Agriculture, Washington, D.C., 1962, could be used as a point of departure in establishing research projects where the energy costs of specific jobs are measured under conditions where the working procedures are defined.

Wayne Van Huss, Director of the Human Energy Laboratory at Michigan State University, is the authority for the statement that this kind of energy measurement can be obtained by working with a subject in a home situation, measuring and recording the pulse rate of the subject for the duration of the periods while the job is being performed. A second step in such research would require that the same subject perform on the treadmill in the laboratory with the pulse rate and oxygen consumption simultaneously measured and recorded. From these two kinds of records, accurate energy costs could be determined for a variety of homemaking tasks. This kind of information is needed to give proof to the fact that it is not what job is done but how it is done that is important in the management of limited energy.

Other types of research are needed that will determine better working procedures for the disabled homemaker. The type of research project where the handicapped homemaker is the subject investigated, as has been carried out at the University of Connecticut and at the University of Illinois, should be continued and expanded.

There is a need for more teaching aids, such as 16 mm sound color film. A variety of short films could cover a particular phase of home management such as planning a kitchen for a rehabilitation center or apply work simplification principles to doing the family laundry or to cleaning.

For the handicapped homemaker there is a need for a variety of small leaflet-type references where work simplification principles are applied to a specific job. The Michigan Heart Association and American Heart Association have a few such leaflets (for example, the Take It Easy series) and they are more in demand than the conventional size bulletin.

In summary, as we give attention to helping the disabled homemakers to do the best job of homemaking possible, it is important to improve the quality of the help given them. This involves better training for the professional worker who works with the disabled homemaker; requires more research to insure the authenticity of the home management information taught; and points to the need of providing better ways of presenting subject-matter information to the rehabilitation worker and to the handicapped homemaker.

DISCUSSION GUIDE OF RESOURCE MATERIALS ON HOUSING FOR THE DISABLED

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HOUSING, ALONG WITH clothing and food, is an area that a physically limited homemaker has in common with all other physically limited persons. Consequently, we are concerned with certain basic concepts regarding these three areas in relation to the handicapped, plus the special considerations that apply because it is the homemaker's job to care for home and clothing and plan and prepare meals.

The living situation may well set the stage for the independent living and self-care that have proved possible through comprehensive rehabilitation services. Or to put it negatively, inadequate housing arrangements for a person who has achieved optimum benefit from rehabilitation services can render much of the training ineffective. It has happened that individuals have spent hours learning to transfer from wheelchair to toilet seat when there were no indoor toilet facilities at home. Therefore, housing must be considered in the concept of total rehabilitation.

A home should provide a safe and comfortable place to live. It should provide the necessary space and facilities for self-care. It should be possible to get in and out of the home independently if the person is capable of independent movement or with a minimum of effort on the part of an aide if independent movement is impossible. If an occupant's employment is carried on in the home, there should be space for this. If the employment is that of homemaking, even greater freedom of movement is necessary and many of the work areas require special attention. A desk or a workbench will not suffice.

I am pointing these things out, not because there is anything new in these facts but because it may help us to evaluate the resources available to help in planning. We must know what now exists within the framework of need before we are ready to evaluate and make recommendations for the future.

What kind of living facilities are we considering? Since we are concerned with homemaking, this limits our consideration to living arrangements where a man or woman is engaged in this occupation

—either a private dwelling or a multiple unit dwelling (apartment house).

We will be discussing *architectural features*—not equipment—although one may have to think a bit about equipment when allocating space. We should be thinking in terms of what is needed in planning new housing and adapting old housing.

Who Needs Information

Our first task is to decide *who* needs information on housing the disabled. I would include the following groups:

Architects and builders who are planning and constructing dwellings.

Therapists who are training the handicapped, especially those concerned with activities of daily living and homemaking.

Handicapped individuals and their families, who are assisting with their own plans for the future.

Social workers who are trying to house their clients properly.

Public officials who are establishing standards for public housing.

Public and private finance agencies.

Kind of Resource Material Needed

Our next consideration should be the kind of resource material needed. What will the architects, therapists, and others need? The list might begin with:

Specific information on certain space and dimensional requirements.

Films, slides, and illustrated brochures of plans and adaptations, with special attention to bathrooms, kitchens, storage facilities, and other possible work areas.

Guides or points to think about, including building codes, when planning for the severely disabled.

RESOURCE MATERIAL NOW AVAILABLE

Resource materials in housing are the product of research, experience (often of the trial and error variety) of people who have put together the best information available and then modified their plans as financial necessity dictated, and tangential sources such as those providing information on the common, garden variety of adequate housing, housing for the elderly, institutional situations (rehabilitation centers, homes, schools, workshops) and public buildings.

As we look at resource materials we will note those that are research reports. It may help later to define areas where additional

research is needed. We will probably find that the sources are scattered—there is much that has been done that has not been pulled together for easy reference and no central place where one might look for information. This is discouraging to anyone who needs information in a hurry and who may not even know that the information exists, much less where to look for it.

Following are some of the kinds of resource material that we do have:

House plans. This is essentially the finished product—how some people have worked out living arrangements to compensate for their limitations. In this collection the private home is featured. I note a lack of any publications or pictures indicating what has been done in multiple housing units, although we know that some cities have provided certain units for the disabled in their public housing projects.

Again we have pictures of some of these—and additional suggestions of specific features used in adaptation. Many, many such adaptations have been made, but how do we go about finding the ideas when we need them? The sources of such pictures are limited.

Space requirements and general recommendations. Some of this information is based on good solid research and some on—will I be flippant if I call it educated guesses?

Kitchen planning is one area where a great deal of research has been done both for new kitchens and adaptations. Kitchen planning for the handicapped begins with the basic principles of good design with work simplification in mind.

Now we turn to the tangential resources:

Housing for the aging has much to contribute. House of Freedom¹ and The Functional Home² were both planned as either retirement housing or for the handicapped. It is becoming an accepted fact that planners for the aging recognize that infirmities and disabilities come with age and are building safety features and added comfort into the housing for the elderly. Dr. Howard Rusk stated at the dedication of The Functional Home that a retiring couple might be buying insurance as well as a home—insurance that they could remain in the home after disability struck because the design permitted ease of circulation or even of caring for an invalid. This is probably true of much of the new housing for the elderly.

However, we cannot borrow ideas or houses from the elderly to house all the handicapped. Housing for the elderly is *new* housing

¹ Douglas Fir Plywood Association, Tacoma 2, Washington.

² At the Institute of Physical Medicine and Rehabilitation in New York City.

and it is housing for small families. It does not help the family with several children. Resource material from this source is helpful and widely publicized.

The *Architectural Barriers* project³ again has bits to add to our knowledge for private housing. Although this deals with public buildings the information is as sound as many skilled people could make it and thorough research was done to fill in gaps in knowledge. Turning space, design of stairs, pitch and construction of ramps and many other details can be lifted for application to private homes. Would it be possible to rework some of the specifications for home builders?

Institutional situations also provide some basic information. Where can you get better information about bathrooms and sleeping quarters than in a well-designed rehabilitation center? Or a dormitory housing disabled students?

It may be of interest, too, to see what is being done *abroad*—the type of research, the cooperating agencies. In the countries whose living standards are similar to our own, much of their research findings can be applied to our own plans.

These categories are by no means exhaustive. What other resource materials do we need? What is needed in terms of dissemination of information?

My general conclusions and recommendations about the resource materials in housing are:

1. That a great deal of helpful information is available.
2. That the material needs to be assembled in some orderly manner as in a series of pamphlets.
3. That it should be distributed by some well-known and permanent source.
4. That films and slides for group teaching, promotion, etc. are likewise readily available.

³ Sponsored by the National Society for Crippled Children and Adults.

SOME RESOURCE MATERIAL IN THE AREA OF FAMILY RELATIONS

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NUMEROUS FASCINATING autobiographies and biographies concern people who have physical disabilities. One I read recently had this description on its jacket: "It is the true and moving account of the attainment of a full life by one who seemed doomed to the partial existence of the physically handicapped."

This assumption that the person with a physical handicap cannot have a full life is one which is all too frequently made. It is true that he may not attain it, but this may also be true of the unhandicapped person. It is important to remember, however, that there is still tremendous scope for meaningful activity, because one's state is an adjustive one. The person with a handicap has a right to a whole life, no matter how different he may be. The attitude expressed on the book jacket seems, though, to be a rather common one. In the autobiography itself, the person escaped her doom because an operation restored her hearing and she no longer had a disability. The blurb on the cover infers that her life is now full, even though the reader soon discovers that she has rather constant difficulties with her interpersonal relations.

For those interested in the rehabilitation of the homemaker who has a physical handicap, some understanding of the psychological aspects of disability is of prime importance. This is very true if one is concerned with family relations. One of the biggest problems a person with a handicap has is one of feelings—his feelings about it and the attitudes and feelings of others, especially those in the family, toward the disability.

Victor Christopherson (1) and others have noted that frequently there does not seem to be the relation one might expect between the seriousness of the handicap and how the woman adjusts to it, to her interpersonal relations, and to her role as a homemaker. Perhaps she is achieving far more than seems possible. On the other hand, it may seem that she could be adjusting much more effectively than she is. Apparently adequacies or inadequacies derive from something other than the disability itself. The psychological aspects of disability may be far more handicapping than the physical.

Physical Disability—A Psychological Approach by Beatrice A. Wright (2) gives an exciting and realistic presentation of the social-psychological situations with which a person with atypical physique

is confronted and is good background material for someone concerned with rehabilitation. A few of the highlights from this book, illustrate connotations for family relations.

One point is that a physically disabled person is also a physically abled person, and there are things he *can* do, if he will, as well as things he cannot do. Therefore, it is far better to refer to someone as being a person with a physical disability, rather than a physically disabled person, for the former connotes that a person with a disability is first a person with many unspecified characteristics in addition to being partially disabled. As in my opening example, it is all too easy to find that one's whole life can be reduced to the disabling aspects of the physique. The importance of this in family relations can hardly be overestimated.

Physique stimulates value judgments. Rusk and Taylor (3) made a study of 50 college students which shows this, among other things. Sixty-five percent of the students stated that they would not marry a person with an amputated leg, 50 percent stated that they would not date such a person: 85 percent stated that they would not marry and 72 percent that they would not date a deaf person. One can see why the person who is the amputee, who is deaf, or who has some other disability wonders about his chances for marriage when he senses these attitudes. He is put into an inferior social position by others because of one aspect of his person. The young person may think that no one will ever want to marry him. Perhaps this is the period in life which is hardest for a person growing up with a disability. He may often be extremely lonely, even though he has plenty of friends of the same sex. It may be several years before he finds someone who will love him for what he is. It is interesting to wonder what attitudes would carry over and how he would adjust if one of the students who held the attitudes toward disability Rusk and Taylor reported were to marry someone who later became handicapped in some way.

Dr. Wright says that many people expect persons with disabilities to be enmeshed permanently in their fate. We have all noticed examples of this view. For instance, a person with a physical handicap achieves unusual success in extracurricular activities in college. He may be considered to be compensating—trying to make up for a shortcoming—when he is merely interested in what he is doing. He has nothing to make up for. Or perhaps he refuses to join in some activity. He is assumed to be feeling inferior, when he merely has a realistic understanding of his limitations. Another example might be that of a happily married person who has a handicap. The marriage may seem *unusually* happy to the nondisabled onlooker because of the limitations he feels a disability should impose. An outsider may look at the succumbing aspects of a situation instead

of at the coping aspects. If a family feels permanently enmeshed in an impossible situation, a rehabilitation counselor can play a part in helping its members find coping aspects.

Value Attitudes Toward Disability

One of the interesting sections of Dr. Wright's book concerns value changes which can strengthen adjustment in cases of disability. Again, the family may need help in thinking through its values. The first value change has to do with *enlarging the scope of values* so that one realizes that the disability is not the only thing that matters. The second has to do with *subordinating physique*; other values are more important. The third is concerned with *containing disability affects*—the disability does not affect all situations. A remark a minister made in a speech I heard last fall fits in here. He said—in the most delightful of Scotch brogues—"You have all the power you will ever need, in reserve." The fourth point is arriving at comparative values and asset values; one learns to look upon his physique in terms of what it allows him to do and not to do, without comparing himself to others or to what he could do before he incurred the handicap. In *Victory in My Hands*, Harold Russell speaking on the topic of subordinating physique has this to say about Franklin D. Roosevelt:

That was the greatest lesson of his magnificent fight. That was the innermost secret of his triumph. He had overcome not only his physical handicap but his spiritual one, as well. He had accepted his disability. For what he had missed he had gained something immeasurably more valuable. He was the master of himself and his destiny. (4)

Dr. Wright says that it makes all of the difference in the world if painful facts about oneself are realized first in an accepting, friendly, warm, and loving atmosphere. She was referring particularly to helping a young person be aware of negative and devaluating aspects of disability, along with the coping aspects. The same principle would apply if a person faced living with a disability for the first time when an adult. I can remember walking down a road in old Quebec. The street was so narrow that I felt I could stretch out my hands and touch tenements on either side. Mothers were sitting in front of the houses on benches right along the street—there were no yards. Little children were playing in the road, and everyone was talking only in French. As I went down the street, a little girl about five fell in beside me and began to imitate my walk in an exaggerated way. The mothers laughed uproariously. I was an adult at the time. If I had been a child, my self-esteem might have been shattered by this reception from both children and adults, unless I had been helped to accept the disability as nondevaluating. (It is appropriate to mention here an article by Aline B. Auerbach

entitled "Group Education for Parents of the Handicapped" (5). She describes a series of programs conducted by the Child Study Association of America to train social workers to serve as leaders in group discussions geared to the parents of handicapped children. Perhaps in such a group, parents could discuss together how to help their children cope with disability and how to face the negative and devaluating aspects.)

Self-Concept Role in Interpersonal Relations

Dr. Wright also discusses the significance of the self-concept and the role it plays in interpersonal relations. One of the points she makes again is that there is good reason to believe that the so-called nondisabled hold both positive and negative attitudes toward persons with disabilities and the positive attitudes will more readily be aroused in the family and outside it when the person has accepted his disability and thinks that other people can accept it, too. In other words, if he is comfortable with himself, others are far more apt to be comfortable with him. This means that the person with the disability is responsible for setting the stage or mood.

At other times, too, the person with the handicap has to set the stage. One of these involves housework. All homemakers with handicaps are not fortunate enough to have received training in simplified methods of work adapted to their particular needs. Even if they have received help in work simplification and theoretically can do almost everything they formerly did, the time element will enter in; they will be slower. After a disability has occurred, it will probably not be any more possible than it was before for many families to hire household help. If the bulk of the housework must now be done by husband and children, it becomes particularly important to decide *together* what is really important, what standards are reasonable and realistic, and what can be left undone. These standards may be quite different from ones held formerly. This may mean that a real change of attitude becomes necessary on the part of the homemaker and perhaps on the part of the family as well. The homemaker and her family may need to be helped to see that her homemaking role is particularly important now as she helps with family decisions. If she can be reasonably happy and optimistic, the rest of the family will be cheerful too; the family is apt to react as she gives them the cue. She may also discover that she had been doing many things herself which could be done just as well or better by others, without creating any family hardships.

I have, of course, hardly tapped the contents of the Wright book. One is left with the feeling that it is very possible to learn to cope with disability instead of succumbing to it. The two rules stressed at the Institute of Physical Medicine and Rehabilitation at Bellevue

Hospital, New York City, might well be emphasized, not only with the person with the disability but with her whole family: "You still have a lot more ability than you have disability" and "You can't disable ambition."

Family Under Stress

Although very little has been written specifically in the area of family relations in connection with the rehabilitation of the homemaker who has a physical handicap, there is research concerning the family under stress which relates to this discussion. (Studies have recorded reactions of families to sudden impoverishment, to bereavement, to desertion, to infidelity, to wartime separation and reunion for example.) As Cynthia P. Deutsch and Judith A. Goldston point out in an article in *Marriage and Family Living* (6), the sustaining of a massive disability by one family member can be considered analogous to other traumas to a family structure.

An article by Reuben Hill, entitled "Social Stresses on the Family, Generic Features of Families Under Stress," is also pertinent in this respect (7). He summarizes the major issues and findings in family crisis research as seen by family sociologists.

First he identifies the major conceptual properties of the family. It is an interacting and transacting organization—an "arena of interacting personalities, intricately organized internally into positions, norms, and roles." Although because of its unusual age composition and its uncertain sex composition it is not ideally manned to withstand stress, society has given to the family the heaviest of all responsibilities: socializing and orienting the young and meeting the major emotional needs of all its members.

Hill thus describes the way in which the family functions in equilibrating its members' troubles:

The modern family lives in a greater state of tension precisely because it is the great burden carrier of the social order. In a society of rapid social change, problems outnumber solutions, and the resulting uncertainties are absorbed by the members of society, who are for the most part also members of families. Because the family is the bottleneck through which all troubles pass, no other association so reflects the strains and stresses of life. With few exceptions persons in work-a-day America return to rehearse their daily frustrations within the family, and hope to get the necessary understanding and resilience to return the morrow to the fray.

Thus, the good family today is not only the focal point of frustration and tensions, but also the source for resolving frustrations and releasing tensions . . . Through its capacity for sympathy, understanding, and unlimited support, the family rehabilitates personalities bruised in the course of competitive daily living. In that capacity the family is literally love in action. (7, pp. 139-150)

Crisis-precipitating events—or stressors—are not uniformly the same for all families; the stressor event must be seen as a variable rather than as a constant in research on family crisis. The stressor

is transformed into a crisis depending on the meaning dimension—the definition the family makes of the event.

Dr. Hill next discusses systems of classifying family troubles which have been used by investigators and goes on to an explanation of factors making for crisis-proneness in families. Three researchers, Ruth Shonle Cavan, K. H. Ranck and Earl L. Koos, are in essential agreement that:

A crisis-proof family must have agreement on its role structure, subordination of personal ambitions to family goals, satisfactions within the family obtained because it is successfully meeting the physical and emotional needs of its members, and goals toward which the family is moving collectively. Having all of these, the family is adequately organized. Lacking them, the family is inadequately organized and likely to prove vulnerable to crisis-precipitating events (in 7, p. 144).

The outlook a family has is also important in determining its crisis-proneness—whether it defines the event as challenging or crisis-provoking.

Dr. Hill states that adjustment to a crisis threatening the family depends upon the adequacy of role performance of its members. In a crisis, role patterns may change and the family may have to work out new patterns. Until it does this, the family may be slowed up in its affectional and emotion-satisfying performances. We will come back to this matter of role later.

Adjustment to Crisis

The course of adjustment to crisis varies from family to family and crisis to crisis, but in general there seems to be a roller-coaster pattern.

As a result of meeting a crisis, the family members are collectively numbed by the blow. They may meet friends, at first, as if the blow had not fallen. Then, as the facts are assimilated, there follows a downward slump in organization, roles are played with less enthusiasm, resentments are smothered or expressed, conflicts are expressed or converted into tensions that make for strained relations. As the nadir of disorganization is reached, things begin improving, new routines arrived at by trial-and-error or by thoughtful planning and sacrificing are put into effect, and some minimum agreements about the future are reached. The components parts to the roller-coaster profile of adjustment to crisis are: crisis disorganization recovery reorganization. (7, p. 146)

Dr. Hill lists the following factors as being conducive to good adjustment to crisis: family adaptability, family integration, affectional relations among family members, good marital adjustment of husband and wife, companionable parent-child relationships, family council type of control in decision-making, social participation of wife, and previous successful experience with crisis. There is a challenge here for family life education and for preventive social work.

Evelyn Duvall has an illuminating section on crisis in her book, *Family Development* (8). She states that a good family is not one without problems; rather, it is a family that uses its resources to face the inevitable crises that strike.

Studies have shown that lower class families, less well educated families, newcomers in a community, and racial and ethnic minorities have more severe family crises and do not weather them as well as do the more comfortably situated families who have educational and financial supports and status which may help soften the shocks that come. The low-income family is not as apt to seek help with its problems or cope with them as directly as do the families with more adequate incomes. They may not recognize their problems; they may not know where to get help; and help is not as readily available to them. As Dr. Duvall points out:

Family developmental tasks are difficult under the most favorable circumstances. Meeting the demanding requirements of a growing family and encouraging the development of family members of differing ages, sexes, interests, and personalities are ongoing responsibilities of exacting magnitude. Yet the strength of the entire society depends, in large measure, upon how well families fulfill their central task of raising creative men and women able to solve their personal and family problems. (8, p. 511)

Dr. Duvall quotes a report of a nationwide survey of the way Americans are facing their problems, most of which are family connected (9):

1. They have more chance for dealing with their troubles when they approach them subjectively, when they see them in internal-psychological, rather than external-physical terms, and at the same time wrestle with them actively instead of accepting them with apathy.
2. Their ability to adopt this attitude of "healthful worry" is, more than any other factor, dependent upon education. The higher their education the greater their self-awareness, the greater their knowledge of channels for help, and, as a corollary to education, the more they can afford to spend on expert, effective help.
3. Most people have to rely on their own inner resources as they face their problems. When they do obtain help, it is usually informal, expedient, and temporary.
4. The problem of obtaining adequate professional help is particularly important in the lower status groups of the population.

Role Perceptions

Victor A. Christopherson has published some particularly pertinent resource material for one interested in family relations and the homemaker with a handicap. The first article I want to mention is entitled "Role Modifications of the Handicapped Homemaker." (10)

Dr. Christopherson reminds us that in spite of sex-role confusion in today's society, to the extent that there is an "American Culture,"

homemaking and breadwinning are still the major roles of women and men, respectively. When role changes occur, as they may among women who become physically handicapped, the individual needs to reappraise herself in relation to her goals and the means available for realizing them. This may be a very threatening and disorganizing experience. Concerning concepts of role and role modification, Dr. Christopherson says:

Role might be considered as a system of related behavior that a person regularly performs in a certain group or social situation as a result of his "notions" of (a) the general and characteristic nature of the situation, (b) the expectations of the members of the groups concerning him, and (c) his own obligations and capabilities. Other determinants of role are the notions of other persons in the situation concerning the individual. Also, such factors as age, sex, and family culture are taken into account in the definition of role within the family group. . . . Role adjustment is apparent when a fairly clear-cut division of labor has been effected and family members carry out the tasks associated with their roles in a way that gets the job done with a minimum of frustration and duplication or neglect. John Spiegel uses the term *complementarity* to describe the situation. Spiegel indicates that a high complementarity of roles within a family facilitates equilibrium, whereas a low complementarity makes for disequilibrium. The family role behavior is re-equilibrated when, after disequilibrium, role complementarity is restored or, in effect, when the behavior of the family members is repatterned in such a way that individual and family needs are met in a responsible and efficient way. Spiegel states: "When complementarity of roles has been established on an essentially new basis, we can use the term "role modification." (10, p. 112)

The homemaking-mother role can be considered an "all-purpose role." The family may become disequilibrated and vulnerable if the homemaker who becomes handicapped cannot carry out this all-purpose role. As roles are redefined, other family members are frequently involved, and roles that have worth-inducing value to the homemaker are taken over by others. Sometimes the mother's emotional and psychological needs are overlooked in the anxiety over getting everything done. These tasks may become so satisfying to those doing them that they are unwilling to give them up even when the mother is again able to do them. Or if those who have assumed new tasks are unhappy in their performance, the mother may feel guilty, in addition to her frustration and anxiety. Dr. Christopherson emphasizes the need for a highly specialized kind of rehabilitative education, going far beyond dealing only with physical and organic difficulties. The homemaker and the members of her family all need to understand the goals of rehabilitation and the ways of achieving them.

After reporting a study in Arizona of handicapped homemakers with children 12 years of age or younger, which shows in a meaningful way the nature of role modification, he calls attention to the significance of the phenomenon of perception for rehabilitation

theory and practice. The feelings one has about a role and himself in relation to it are very important. It is most difficult for a homemaker with severe physical limitations to form a worth-inducing identification with the basic homemaking role when many of the tasks and responsibilities are beyond her. Dr. Christopherson suggests that she can assume an "enabling" role. This is difficult to describe. However,

The fifteen severely handicapped homemakers who most clearly manifested the enabling role seemed to have the majority of the following behavior characteristics: they were cheerful and optimistic; maximized their emotional rapport with their children and husband; took an active, responsible part in family decisions; encouraged other family members in the new division of labor and rewarded them with cheerful praise and humor. In addition . . . they had faced up to the prognoses of their conditions and no longer had unrealistic hopes or were sensitive to the cosmetic aspects of their conditions. . . . A part of rehabilitation should be concerned with bringing about perceptual changes of such a nature as to generate hope and to promote personal and role adequacy. (10, p. 116)

The importance of the patient's role in the family is also brought out in the article by Deutsch and Goldston (6). The home adjustment patterns of 40 badly disabled victims of polio and their families were studied as part of a larger project investigating the social and psychological variables related to home placement of severely disabled patients and their subsequent adjustment in the family setting. They discovered that it is the patient's social role in the family, before and after his disability, which appears to be the best predictor of home placement. The patient is likely to return home if he can still fulfill in some way an instrumental role. A mother in particular can still fulfill her role. Even with a severe disability, she can exert a psychological control over her children's development, can help make decisions, and can greatly influence the atmosphere in the home.

The disabled husband and father is much less likely to return home, because there is a much greater distance between role prescription and potential role fulfillment. Extent of disability and family income level may operate here in discriminating between the man who returns home and the one who does not.

The young unmarried male is least likely to return home. Young unmarried females and children usually go home. This, too, is explained in terms of cultural role prescriptions.

Family adjustments in cases where the patient has returned home are discussed. The authors believe that the ways the family and its individuals adjust are related to the ways they deal with other stressful situations. It is here that psychodynamic and personality variables seem to play the greatest role. Three kinds of adjustment are described. In the first, the patient-focused group, emphasis is on

the negative physical aspects of the patient, instead of on what he *can* do. The patient continues to be thought of as someone who is "sick" and is not allowed to make the transition to being a person and an integral member of the family. In the second kind of adjustment, the patient is seen solely as a responsibility. Family life is carried on with as little reference as possible to him. In the third type of adjustment, though there are, of course, problems, the family regards the person with the handicap as a contributing member rather than as a special responsibility; and he is thought of in terms of his individual, personal qualities rather than in terms of the disability. The actions of the person with the disability and the degree and manner in which he assumes former responsibilities are important in determining the adjustment of the family.

In another article by Dr. Christopherson, entitled "The Patient and the Family" (10, p. 37), he makes the provocative statement that "the individual with the physical limitation has needs that are probably more nearly like those of physically normal people than they are different. The differences that do exist very likely are of a quantitative rather than a qualitative nature." Dr. Lloyd Lofquist of the University of Minnesota, whose book, *Psychological Research in Rehabilitation*, will soon be published, agrees with this. He says that as a result of his research on the vocational aspects of rehabilitation he is developing a theory of vocational behavior which will embrace people, handicapped or not. He has also developed a scale to measure employment satisfaction. While the people with physical disabilities measure somewhat lower on the scale, he believes this is because of the jobs they so frequently have to take. Too many people think of the physically limited as a breed apart, rather than as normal with additional problems. It is because of the like needs of people that I have listed several books in the family life area in my bibliography for general background information in this field.

Relationships with Family

Dr. Christopherson suggests four stages of disability, which help us to sharpen our perceptions of the disabled person in his important relationships with the family.

The initial stage is the acute stage, when the disaster hits. There is often some panic in the family over the event; they vaguely begin to think about the long-term implications. At this stage most families need some guidance in order to utilize their economic, emotional, and physical resources wisely. In this period, to the extent that the patient is able, the rehabilitation team could very well begin to function. As a rule, at this time emotional relationships are good between the family and the patient.

The second stage, the reconstruction stage, begins when the indi-

vidual has passed the acute stage, and is now trying through surgery, physical therapy, or other means to regain as much of his former physical status as he can. There may be felt or real status change; there may be modification in occupational, social, and sex roles. Dr. Christopherson says that perhaps at this point the ideal rehabilitative goal is realistic and hopeful perception for both the patient and the family. The period is very difficult for the patient and his family from the point of view of expense and emotional problems. If the patient is fortunate, he makes enough progress in the second stage to become largely independent again and can resume many of his former roles and activities.

The third stage, the plateau stage, implies that all the reconstructive measures available have been taken. The person is now concerned with maintaining what gains he has made, in preserving the status quo, and in developing compensatory skills and attributes. From the standpoint of family relations, this may be the most difficult stage of all—primarily because hope for improvement has diminished or gone, a long period of considerable or total care and confinement confronts both patient and family, and financial and emotional resources have worn thin.

Locked relationships may occur—patterns of interaction become stereotyped and stylized. In this period the patient and his family could wisely plan together

for the family to support the patient in his plans, to widen his circle of friends, to develop or adapt vocational and avocational competencies and interests, to find ways to overcome limitations of energy and mobility, and in general to increase productive articulation with society in all its aspects.

In the fourth stage, the deteriorative stage, the patient gives way to the long process of attrition or suffers a terminal attack.

Dr. Christopherson emphasizes that attrition can result just as surely from emotional wear and tear as it can from physical accident or failure. It is important, therefore, not to neglect the interpersonal competency of the individual.

Finally, he makes these important points:

Realistically, we cannot assume that the families of physically limited individuals will necessarily have the intelligence, the values, the education, the motivation, or even the interest to enable them, as a family unit, to proceed independently toward the goals of rehabilitation. Some families have fewer resources than others that can be mobilized, as well as lower thresholds of tolerance to frustration and crises. In this respect families are like individuals; many families and individuals barely able to keep their heads above water under normal circumstances become quickly submerged by the imposition of a serious physical handicap or the addition of an older relative to the household. It seems obvious that special counsel, special rehabilitation education, needs to have the interpersonal competence of the person and the family as a central goal. Perhaps such a focus will better enable the potentialities inherent in the patient, the family and the situation to be combined most productively for the good of all. (10)

Restoration for the Total Person

In conclusion, then . . .

Rehabilitation in a broad sense involves the greatest possible restoration for the total person—not his physical and vocational restoration alone, but a total improvement of his adjustment to his environment. This means that his family life must be included, since family relations can make a terrific impact on the person and his restoration. In fact, he can hardly be treated without taking his environmental and social situation into consideration.

The homemaker with a physical handicap is first of all a person. She has needs, hopes, expectations, and worries about herself and her family life just as anyone else has, though hers may be aggravated considerably by her condition. Unless the members of a rehabilitation team—or even one member who is especially competent in the family life area—have a basic understanding of marriage and the family in today's world, they will be at a real disadvantage.

Since psychology is the study of human behavior, and family life is human behavior in action, I started out by referring particularly to a book on the psychological approach to disability which contains useful insights. Some understanding gained from such a book may help one form a better total picture of the homemaker with whom he is working, including the ways in which she expresses her feelings about being different as well as like those around her. I am not suggesting that members of rehabilitation teams need to be psychologists, but rather that a knowledge of human dynamics and a sensitivity to others are important.

I made no attempt to discuss emotions children might have toward a handicapped parent, but this is an aspect of family relations which would have to be considered in some cases of rehabilitation. In fact, some interesting research could be carried out, for instance in mother-daughter relationships when the mother has a handicap.

There have been several articles in the Minneapolis papers lately about sheltered workshops. As I read them, I thought about the people with physical disabilities who have problems other than those of a vocational nature—problems which have to do with family relations, for instance. Perhaps they don't know how to find help. Perhaps there is not enough help available. One is overwhelmed by the sheer number of people who are in some way handicapped or who will be handicapped in the future. In a broad way education for family life at every stage of human development through a variety of channels would greatly aid the field of rehabilitation for the future. People prepared for living reasonably well-adjusted lives in adequately organized and stable families have a better chance for survival when they face crises, especially since most people must rely mainly on their own inner resources as they face prob-

lems. With role variables playing such a strong part in adjustment to a crisis in a family, perhaps more education should be directed toward understanding and influencing their operation. Although I mentioned the disabled father only briefly, role is of special importance here. Families have particular difficulty in meeting the kind of stress involved when a husband and father is disabled, because he is in a position contrary to the cultural prescription of the male role.

In addition, education through a variety of channels and at all levels of community life could be directed toward developing more wholesome attitudes than presently exist toward disability. Changing these attitudes will take a long time; and some of the characterizations about the disabled which our children read in literature—and which we once read—help aggravate the situation. For example, Captain Hook and Long John Silver, both villainous characters, were identified as amputees in the stories in which they appeared.

I want to close this recommendation for more family life education and this paper by repeating again the statement by Reuben Hill:

The good family today is not only the focal point of frustrations and tensions but also the source for resolving frustrations and releasing tensions . . . Through its capacity for sympathy, understanding, and unlimited support, the family rehabilitates personalities bruised in the course of competitive living. In that capacity the family is literally love in action. (7)

References

1. Christopherson, V. A. Role modifications of the handicapped homemaker. *Rehabilitation Literature* 21, No. 4 (April 1960), pp. 110-117.
2. Wright, B. A. *Physical Disability—A Psychological Approach*. New York: Harper & Brothers, Publishers, 1960.
3. Rusk, H. A., and Taylor, E. J. *New Hope for the Handicapped*. New York: Harper & Brothers, Publishers, 1949.
4. Russell, H., with Rosen, V. *Victory in My Hands*. New York: Farrar, Straus & Cudahy, Inc., 1949, p. 142.
5. Auerbach, A. B. Group education for parents of the handicapped. *Children* 8, No. 4 (July-Aug. 1961), pp. 135-140.
6. Deutsch, C. P., and Goldston, J. A. Family factors in home adjustment of the severely disabled. *Marriage & Family Living* 22, No. 4 (Nov. 1960), pp. 312-316.
7. Hill, R. Social stresses on the family, generic features of families under stress. *Social Casework* 39, No. 2 (Feb.-March 1958), pp. 139-150.
8. Duvall, E. M. *Family Development*. Chicago, Illinois: J. B. Lippincott & Co., 1962.

9. Ibid, p. 511-512 or

Joint Commission on Mental Illness and Health, *Action for Mental Health*. New York: Basic Books, 1961, p. 107.

10. Christopherson, V. A. The patient and the family. *Rehabilitation Literature* 23, No. 2 (Feb. 1962), pp. 34-41.





MEN SOMETIMES NEED HOMEMAHER TRAINING

Connecticut Society For Crippled Children & Adults, Photo

SECTION IV

TRAINING PROFESSIONAL PERSONNEL

- IN HOME ECONOMICS
- IN MEDICINE
- IN NURSING
- IN OCCUPATIONAL
THERAPY
- IN PHYSICAL THERAPY
- IN REHABILITATION
COUNSELING
- IN SOCIAL WORK

HOME ECONOMICS

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IN HUMAN SOCIETY, the family is the foundation of social organization. Home economics is a field of knowledge concerned with strengthening family life through

educating the individual for family living.

improving the services and goods used by families.

conducting research to discover the changing needs of individuals and families and the means of satisfying these needs.

furthering community, national, and world conditions favorable to family living.²

The home economics program educates young people for professional service. A good basic background in the traditional liberal

¹ Vermont Agricultural Experiment Station Journal Series Paper No. 120.

² Home Economics—New Directions: A Statement of Philosophy and Objectives. Prepared by the Committee on Philosophy and Objectives of Home Economics of the American Home Economics Association, 1600 Twentieth St., N.W., Washington 9, D.C., June 1959, p. 4.

arts and science subjects as well as specialized education in home economics are essential. This consists of an undergraduate four-year curriculum with the opportunity to continue through graduate work to the doctoral degree.

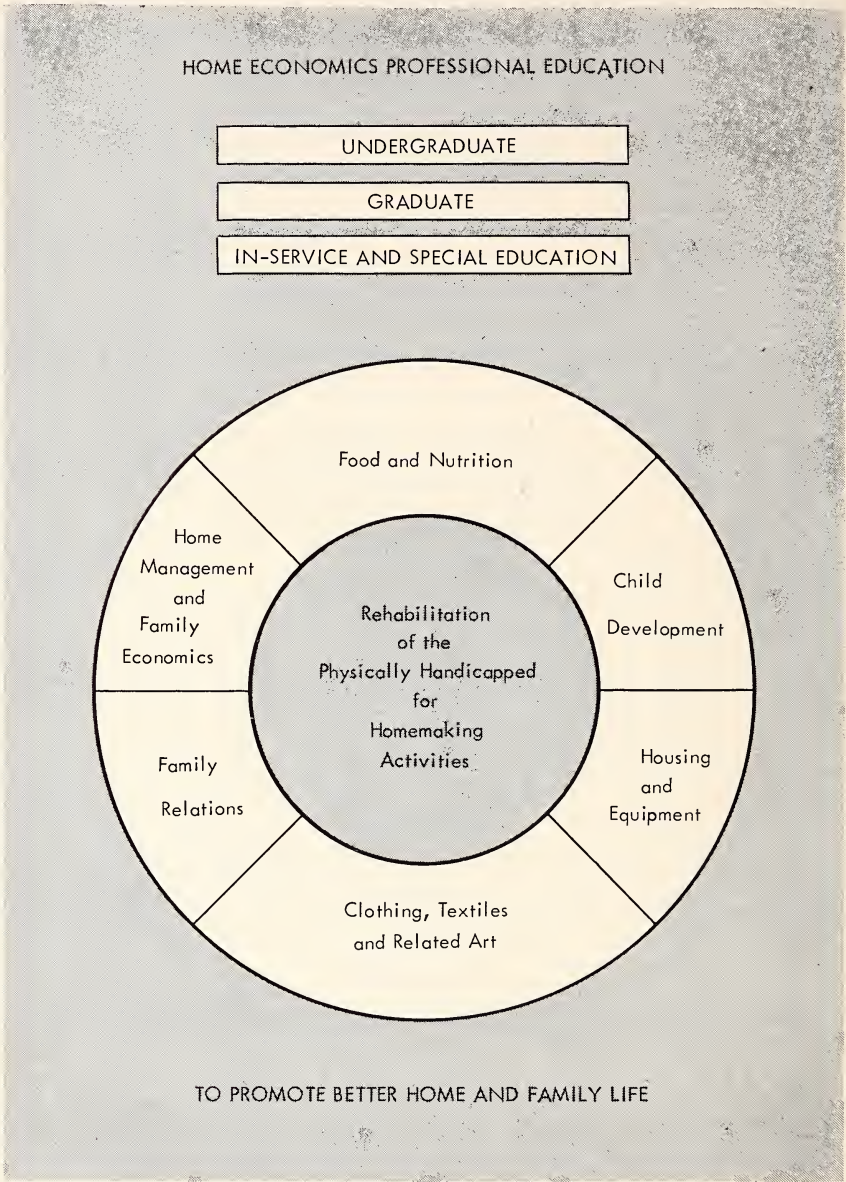


Figure 2

Many phases of the home economics program, shown on the chart, have implications for rehabilitation in homemaking activities. I do not believe that any more than a recognition of the problem and an

introduction to the possibilities for service in this area are possible at the undergraduate level in most universities. No formal classes in homemaker rehabilitation are taught at the undergraduate level. However, many university programs are making a conscious effort to help students become aware of the special concerns of the physically limited and of the contribution home economists can make as resource persons in the various professional areas.

In order to ascertain to some extent the kind of awareness home economics is giving to its educational programs at all levels, I sent a questionnaire to 54 larger institutions of learning. Forty-eight (an amazingly high number) of the questionnaires were returned. Many of the following examples of what is being done across the country reflect these returns.

Let us briefly look at the areas in home economics that have implications for rehabilitation in homemaking activities.

UNDERGRADUATE PROGRAMS

Food and Nutrition

A healthy, well-fed family is a goal every homemaker strives for. The handicapped homemaker may need special help not only with her own diet, but also in preparing well-balanced, economical, attractive, simple meals for her family. Many short cuts and tools are available to simplify and save time in food preparation. The nutritionist can help the handicapped homemaker set realistic goals, for herself and her family, and help her adapt to her own or her family's special dietary needs.

The dietitian is in a position to help interpret dietary modifications prescribed by the physician in terms of the patient's and family's previous eating habits, such as in the case of obesity, diabetes, low-sodium diets and others.

Let me cite a few examples of how food and nutrition students are made aware of the problems of the physically handicapped in homemaking activities.

The University of Nebraska has a special unit in the diet-therapy course related to diet problems for the physically handicapped.

Every student in meal management at the University of Vermont uses the wheelchair kitchen unit.

Oregon State University and the University of Illinois have had wheelchair and blind students in their foods and nutrition courses. Their problems have been discussed and worked out as part of the class participation.

The University of Connecticut and the University of Vermont emphasize work simplification and easy methods of preparation in relation to meal preparation for the physically handicapped.

Child Development

The satisfaction a mother gains from being able to care for her baby is not definable—it affects her emotional well-being and the relationship within her family. Home economics is interested in the child as a member of the family. Our concern is to educate students to help others to better understand the growth and development pattern of the child in relation to his family. Many physically handicapped mothers dress their children and prepare formulas for their babies in addition to other household tasks, but they must have help in simplifying these jobs. Such research bulletins as the "Work Simplification—In Child Care,"³ by Elizabeth May and Neva Waggoner at the University of Connecticut, have helped to spark an interest in rehabilitation in home economics.

The University of Connecticut teaches creative activities in child development courses that can be shared by handicapped parents and their children.

The University of Nebraska, Virginia Polytechnic Institute, Colorado State University, Oregon State University, the University of Arizona, Kansas State University, and others give their students opportunity for special study of handicapped children in preschool programs.

Housing and Equipment

Housing and equipment students must be able to apply their knowledge so as to help families in all kinds of situations and at socioeconomic levels that may be different from their own. Well-planned housing and equipment related to family activities can be adapted to individual cases and are not by any means necessarily related to the amount of money spent. Good functional planning applies to the home of the handicapped as much as it does to that of the physically well homemaker.

Excellent research results are available on heart kitchens, wheelchair kitchens, space standards for household activities.

Undergraduate students are fascinated by seeing and hearing about the research in progress. Resource materials resulting from such research are used in many classes.

At the undergraduate level, students at Ohio State University, University of Maine, Cornell University, Woman's College of the University of North Carolina, among others, include special units in their housing courses. These emphasize problems the physically handicapped must face and the adjustments they can make. The University of Connecticut and Pennsylvania State University have

³ Work Simplification—In Child Care, Elizabeth E. May, Neva R. Waggoner, The School of Home Economics, University of Connecticut, Storrs, Connecticut, October 1962.

discussions of architectural barriers and safety features for the handicapped.

The University of New Mexico, University of Nebraska, University of Kentucky, and University of Vermont teach kitchen planning especially adapted to the physically handicapped.

Students at the University of North Carolina are participating in research on floor surface in relation to safety, homemaking activities, and rehabilitation. Wayne State University relates functional aspects of furniture to the physically handicapped.

Clothing and Textiles and Related Art

The handicapped homemaker has every bit as much interest in being and having her family attractively groomed as any homemaker. Her personal problems are multitudinous. She cannot sacrifice comfort for appearance; she often has special wear problems because of crutches and braces. Clothing for children should be selected for their self-help features. Clothing and household textiles must be easy to care for.

The course in Advanced Clothing Design and Construction at the Woman's College of the University of North Carolina has a special unit in designing garments to minimize physical handicaps.

Students at Virginia Polytechnic Institute, University of Nevada, Kansas State University, and the University of Nebraska, among others, are taught clothing construction in terms of the problem of fitting the physically handicapped.

Ohio State University gives special courses for occupational therapy students in clothing and textiles.

The University of Maryland stresses well-planned sewing centers, for easy access and use, and sewing equipment to meet individual physical limitations.

Many home economics programs use the clothing exhibits from the University of Connecticut and those from garments designed from a study by Clarice Scott of the Agricultural Research Service of the U.S. Department of Agriculture.

Art related to the home and family is a part of everyday life. Oklahoma State University and other universities teach that the basic principles of line, design, and color in the home will give special motivation for optimum physical rehabilitation.

Family Relationships

The job of helping young men and women achieve a basic philosophy for a happy, satisfying life in the home and community is more important today than ever before.

Helping a disabled homemaker to make an adjustment within the family takes the abilities and talents of many fields.

The University of Tennessee, Iowa State University, New York

University, and University of Nebraska, for example, all discuss and have special reports on the effect of a physical handicap on family life.

The University of Connecticut discusses and specifically relates the importance of developing early independence in children of handicapped parents.

State University College of Education at Plattsburgh, New York, gives a Family and Community Health Course for sophomores with emphasis on rehabilitation in homemaking activities. This course includes resource materials available to teachers as well as a study of community and health-related agencies. The Merrill-Palmer Institute has a similar class.

Home Management and Family Economics

The effective use of time, energy, and money through wise choices will help an individual or family achieve its particular goal. Home management reaches across all areas of home economics.

The principles of home management are not any different for the handicapped homemaker than they are for the physically well homemaker, but she *must* learn to be a good manager of her time, her money, and her energy. Work simplification may mean the difference between independent and dependent living. Because, in general, everything a physically handicapped homemaker does takes longer, she must learn to conserve her time as well as her energies for the important tasks performed as a mother and homemaker. She must be motion-minded.

Home management specialists are excellent resource persons. They can help the family weigh choices, simplify tasks, and show the disabled homemakers how to use best their abilities in terms of their own limitations and the family resources. In home management, more universities include rehabilitation in homemaking activities for the physically handicapped than in any other area.

Many of our colleges and schools of home economics discuss and demonstrate work simplification and energy studies in relation to the rehabilitation of the physically handicapped for homemaking activities. Students in occupational and physical therapy at the University of Washington and Colorado State University take courses in work simplification.

In home management courses, Southern Illinois University includes material on economic security and budgeting related to special problems confronting the physically handicapped homemaker.

In cooperation with local heart and health associations and county health nurses, Cornell University students do energy and body mechanics studies on work organization and storage related to the physically handicapped.

Students in the Home Management Residence Laboratory at the State University College of Education, Plattsburgh, New York, discuss and demonstrate the needs of the physically limited homemaker, including the adaption of tools and work simplification principles.

The University of Vermont brings in physically handicapped homemakers to demonstrate their use of the energy-saving kitchen and to discuss their special problems for the home management classes.

GENERAL APPLICATIONS

Some general undergraduate teaching is related to rehabilitation of the physically handicapped for homemaking activities.

Wayne State University at Detroit has students participating in classes for cardiac homemakers. Students help plan workshops and work with professional personnel in rehabilitation. Southern Illinois University gives its honor students the opportunity to do special problems in this area.

The University of Vermont research staff in rehabilitation lectures and demonstrates in freshman orientation and senior seminar. These lectures help students become aware of their responsibility, as career resource people and as members of the community, to use their special competencies to help rehabilitate the physically handicapped for homemaking.

The Home Economics Club at Kansas State University has started a preschool, as a community service project, for handicapped children.

The University of Connecticut uses the rehabilitation research center as a demonstration unit for undergraduate students in all areas of home economics.

In the Occupational Therapy Division of the College of Home Economics at Colorado State University, students receive a basic understanding of home management, work simplification, clothing construction, child development, family relationships, and food and nutrition, along with the traditional therapy courses.

New York University plans to develop an option at the undergraduate and graduate level in cooperation with health-related areas for rehabilitation in homemaking activities.

GRADUATE PROGRAMS

Most home economics graduate programs have the kind of flexibility that offers the opportunity to plan work in rehabilitation for homemaking activities. Any program of this nature must be done in cooperation with health-related areas. Students are now doing advanced work related to rehabilitation of the physically handi-

capped for homemaking activities in home management, housing, child development, food and nutrition, and clothing and textiles. A graduate program could be effectively worked out with a school of occupational therapy or physical therapy. Michigan State University has a \$2,000 scholarship available for a graduate assistantship leading to a master's degree in homemaker rehabilitation.

No formal graduate programs are set up on rehabilitation in home economics. The University of Connecticut started a master's program but found it too costly to continue. It was rewarding, however, and it hopes to reinstate the program when funds are available.

Ohio State, Pennsylvania State, Kentucky, Southern Illinois, Arizona, and Nebraska Universities, to mention a few, have had graduate students in home management doing special reports and theses on the physically handicapped.

Michigan State, Pennsylvania State, and Woman's College of North Carolina University give students opportunity to work with cardiac patients in cooperation with the state heart associations.

At Oregon State University a student working for her master's degree is designing clothing for handicapped in cooperation with the Children's Hospital and the University of Oregon. Kansas State University and Oregon State University also have graduate students working on theses related to clothing for the aging. Both of these universities offer a seminar for graduate students on the clothing problems of the physically handicapped. Graduate students at Pennsylvania State University designed a sewing center and cleaning cart in cooperation with the state heart associations.

Cornell University graduate students are working on designs of chairs and cots for the physically handicapped.

Tufts New England Medical School has a combined dietetic internship and master's program. The internists spend three weeks in the rehabilitation center working with physical therapists, occupational therapists, and vocational counselors.

Merrill-Palmer graduate students may study particularly in the fields of psychotherapy and do intensive work with the child and his family where one member is physically limited. The University of Arizona graduate program relates phases of family relations to rehabilitation of the physically handicapped.

IN-SERVICE TRAINING AND SPECIAL EDUCATION FOR REHABILITATION

Through its sponsorship with other agencies and health groups of workshops and training programs, home economics can take pride in accepting the challenge of helping meet the needs of rehabilitation of the physically handicapped for homemaking activities. Spe-

cial recognition should be given to the American Home Economics Association and the American Dietetic Association. Since 1953, home economics has sponsored or helped with 12 workshops in such areas as work simplification, home management, and the handicapped homemaker.

Home economists have an obligation to use their special knowledge and competencies in homemaking activities. They have this obligation not only as resource persons for patients in hospitals and rehabilitation centers, but also in the capacity of a team member emphasizing rehabilitation in the home of the physically handicapped for homemaking activities.

The University of Vermont, as part of its Vocational Rehabilitation Administration grant, set up an educational program for women interested in part-time employment to be trained as instructors in homemaking rehabilitation. These are graduate home economists, nurses, and physical therapists who will make possible the extension of a more effective service to families and individuals throughout rural Vermont.

The University of Connecticut research laboratories are used for in-service training and as an information center for homemaker rehabilitation throughout the university and State. Their publications have given some very needed excellent resource material to the field.

Wayne State University initiated investigation and intensive programs for cardiac homemakers.

Through their Extension Services, Michigan State University, the University of Minnesota, and the University of Rhode Island have carried on organized staff education classes and individual programs for disabled homemakers. Extension personnel throughout the United States have been used as resource persons, and are being asked to give individual help to the handicapped in rehabilitation for homemaking activities.

The University of Illinois has had Helen McCullough to whom we owe a real debt of gratitude for her research in housing for the disabled homemaker. Her material is used throughout the country for teaching and rehabilitation programs.

Local home economics groups, such as the Cleveland Home Economists in Business, have aided as consultants to rehabilitation centers. In California, the Home Economists in Business group has worked with the blind. Several state universities hold special meetings with county and state heart associations. Home economics teachers work in tuberculosis hospitals in Illinois and Louisiana in particular. Auburn University is offering adult classes centered on the problems of rehabilitation for homemaking activities.

The State University College of Education at Plattsburgh, New York, emphasizes the use of home economics teachers as resource

persons and brings them in for special help. Dr. May helped with such an in-service training program there last summer.

FUTURE PLANS AND RECOMMENDATIONS

In spite of the evident strides toward making professional home economists aware of the need to be available as resource persons in rehabilitation for homemaking activities, we have only scratched the surface. We must emphasize in all of our educational programs the importance of relating our competencies as part of a team toward rehabilitation.

An even greater deficiency is that as home economists we have failed to let the health-related professions know that we have a specialized knowledge that is a resource they should utilize for rehabilitation in homemaking activities. Home economics is a natural field for all related professions interested in this area to turn to for help.

The following schools of home economics have already made some plans for specialized education in rehabilitation:

Auburn University is planning, as part of the dedication for its new home economics building, to hold a three-day workshop on rehabilitation of the physically handicapped homemaker and the aging for homemaking activities this spring.

Colorado State University will hold a workshop in 1963 on rehabilitation for homemaking activities.

South Dakota State University plans a workshop in 1964 on rehabilitation for homemaking activities.

GENERAL RECOMMENDATIONS

I would like to make the following general recommendations for home economics.

1. Encourage schools of home economics to develop interdisciplinary graduate programs in the field of rehabilitation in homemaking activities.
2. Encourage continued research in cooperation with health-related professions in all areas of home economics, in order to find the best possible solutions for rehabilitation in homemaking activities.
3. Offer opportunities for all college majors in home economics to see the relationship of their field of specialization to rehabilitation in homemaking activities and to see the far-reaching effects such awareness can have on the program.
4. Develop an awareness among home economics education majors for opportunities to be a resource person in homemaking education for the handicapped school-age child or the homebound child.

5. Place greater emphasis on serving as consultants to families who need help in rehabilitation in homemaking activities through such media as adult classes, hospital clinics, and Extension meetings, in co-operation with existing health and welfare agencies.
6. Take leadership in interpreting, developing, and publishing resource materials in all home economics areas which can be used by health-related professions concerned with rehabilitation.
7. Encourage leaders in health-related professions and physicians to use the resources of the schools of home economics and take advantage of the various in-service training opportunities available.

This problem of helping to rehabilitate the physically handicapped for homemaking activities must be a team effort. No one profession has all the competencies needed to give the ultimate assistance these individuals and families need. The effort of working together has proved to be successful and will be even more fruitful as we become more aware of what each profession has to offer in this worthy and exciting venture.

REHABILITATION OF THE HOMEMAKER WITH A HANDICAP: CHALLENGE TO MEDICINE

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THE MOST SERIOUS challenge to the entire team involved in rehabilitation is in the case of the rehabilitation of a homemaker with a handicap. This is particularly true for the medical profession. In the case of rehabilitation of the homemaker with a handicap, there is no chance of a change of occupation to something which is more compatible with the handicap. Under these circumstances, the only possibility then is to achieve the maximum rehabilitation of the individual by every possible means that the team has at its disposal. It is important here to remember Mary Switzer's favorite definition of rehabilitation, which is "the termination of dependency." It is obviously impossible in almost any case of a handicapped person to terminate completely dependency in all categories; however, the team must always remember that termina-

tion of dependency in any small degree and in any possible way is always a very clear-cut case.

The first approach to any such problem always looks rather hopeless. This is because we tend to lump such a complex problem into a sort of a "medical wish basket," but unfortunately the problem cannot be solved by such an oversimplified approach. The activities of the homemaker are extremely complex and cover a number of different areas and a variety of skills, requiring different types of physical and mental activity. The first approach to any such situation is to define clearly the various problems so that they can be accurately described and classified. Only then will it be possible to take the first step on the road to rehabilitation of the homemaker with a handicap. That is, we must diagnose the specific problems which exist in relation to the exact degrees of handicap which exist in the individual in question. Generalities here will not suffice.

Following such an accurate diagnosis, a prescription can be written for the type of treatment. This is actually a plan of rehabilitation which will lead to a maximum termination of dependency in this individual case. This, very obviously, must be a complete team effort, and every possible resource must be called upon.

From the standpoint of the physician, the challenge is a very great one; and each field of medicine must make its maximum effort. In the field of internal medicine, for example, the maximum efficiency of the heart and respiratory system must be achieved and this must always be balanced against increasing the activity past a level that might be detrimental. The field of surgery can offer procedures which will improve function or reduce pain and increase the over-all effectiveness of the individual. Perhaps the greatest challenge lies in the field of physical medicine where every modality of this complex specialty must be used to bring the homemaker with a handicap to the highest peak of efficiency in physical condition and in training in special skills.

The spectacular recent advances in both prosthetics and orthotics should be tapped to their maximum to offer increasing physical capabilities to the handicapped. Too often in dealing with the homemaker, we find that there is a great potential gain to be made in these fields but because of the lack of proper orientation of the patient, a prosthesis or brace is not accepted for cosmetic reasons.

The field of psychiatry certainly must not be overlooked since this may pose the greatest challenge of all, and at the moment, unfortunately has perhaps been least explored.

All the other numerous groups who have help to offer must also be mentioned and will be covered much more thoroughly by others more familiar with these areas. They are: home economics, sociology, psychology, occupational therapy, physical therapy, and others.

Specific Recommendations

The pattern established in research in artificial limbs immediately after World War II, I think, offers a good framework on which to establish an attack on the problem of the homemaker with a handicap. The complex research in the field of artificial limbs was guided by a committee which is now established as an official committee of the National Research Council, National Academy of Sciences, and is called the "Committee on Prosthetics Research and Development." The fact that this is not the entire picture is reflected in the activities of another committee under the National Research Council, National Academy of Sciences, entitled the Committee on Prosthetics, Education and Information. This recognizes the fact that the development of new devices and procedures is not enough. They must be disseminated to the medical profession and related specialties before they are effective.

Looking back over the past 16 years of research in the field of artificial limbs, it is quite obvious that the spectacular gains could not have been made without the coordinating efforts of the CPRD. The actual research has been done, of course, all over the country by a number of universities which have particular interest and capabilities in the various complex areas related to this field.

It would seem, then, that the first step in rehabilitation of the homemaker with a handicap would be the establishment of a similar committee to offer its directive and coordinative efforts and to assist in decisions as to the most effective use of research monies available and also as a clearinghouse of information for the various research projects involved. In view of the great need to disseminate such information, a committee on education and information should likewise begin its work. There is sufficient material available for the present so that both committees should probably be activated at the same time and adequate liaison established between the two committees.

NURSING

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IT WAS NOT EASY to organize material for this presentation, because of the complexities of professional education programs for nursing. Nursing is just emerging as a true profession and curricula are being revised constantly. Collegiate programs in nursing are on both the undergraduate and graduate level. My frame of reference here is the program as offered at my own school, the Boston University School of Nursing. In each instance, I shall give general background information about each program—undergraduate and graduate—and attempt to identify general concepts as well as specific content in the curricula that bear on training professional personnel for rehabilitation in homemaking activities.

Boston University School of Nursing is an autonomous professional school, fully accredited by the accrediting service of the National League For Nursing, and is an integral part of the total University. Students, both undergraduate and graduate, may take appropriate courses in any of the colleges or professional schools within the University. There are 970 students enrolled in the various programs—285 in the basic program; 376 in the general nursing program; 198 in graduate programs with 18 of these in rehabilitation nursing; and 111 part-time students.

BASIC PROFESSIONAL NURSING PROGRAM

The Basic Professional Nursing Program is designed for the qualified high school graduate who desires to obtain a college education leading to a baccalaureate degree preparing her for services to people and the community through professional nursing. The School offers a well-rounded program of four academic years for this group of students. The curriculum for the preparation of the professional nurse is developed around three major cores of educational experience: that related to the biological and physical sciences, that related to the humanities and social sciences, and that related to health, medical science, and nursing.

The general education—encompassing social, biological, and physical sciences and the humanities—serves as a sound foundation for professional nursing and constitutes about one-half of the 128 semester credits required in the program. Nursing and academic subjects

are offered throughout the entire curriculum. Major emphasis on professional education occurs in the junior and senior years. The nursing core, which integrates theory and practice develops through selected learning experience, understandings, skills, and appreciations in the areas of communication, interpersonal relations, management, manual skills, problem-solving, and teaching. This core of fundamentals of nursing extends through the clinical field instruction, becoming deeper in nature and broader in scope. Study is made of the nurse's role as a professional team member in agency programs of cooperative action directed toward improvement of health services to the individual, the family, and the community.

There is a thread of rehabilitation which runs throughout the courses, beginning with the student's introduction to nursing in the fundamental of nursing courses, including theory and field instruction, in the freshman and sophomore years. The thread is further strengthened as the student progresses in knowledge, skills, and understanding through theory and field instruction in psychiatry, maternal-child health nursing, and medical-surgical nursing during her junior year. In the fourth year of the program, through theory and field instruction course in public health nursing, psychiatric nursing and nursing in long-term illness, the senior student has opportunity to demonstrate how much integration has taken place of all the concepts involved in the nursing process.

The field instruction in all instances is carried out as an educational process and in a variety of appropriate cooperating agencies on a contractual basis, but the direction, supervision and guidance of the student through the experience is by university faculty members. The only exception is during the public health experience when some of the day-by-day guidance is sometimes *shared* with field instructors employed by the service agency.

No course or portion of a course in the basic program is labeled as rehabilitation nor directed specifically to the care of the physically handicapped homemaker. This is understandable when one considers all the concepts, principles, knowledges, attitudes, behaviors, and enthusiasms we need to engender in the young student as she moves through a generic program consciously designed to prepare her to assume a beginning role as a qualified professional nurse as well as a reasonably educated young woman.

Contributing Areas

The following are some of the areas identifiable in the curriculum that are related to the theme of this Workshop and should assist the nurse, graduated from the basic program, to participate to some degree in the rehabilitation of the physically handicapped homemaker.

1. In all courses in nursing, emphasis is placed on comprehensive care of patients which includes meeting the immediate needs of patients, on goal setting, on patient teaching, on support of patients necessary during all stages of illness to produce maximum rehabilitation for each patient.
2. Feelings about the need for patients to become as adjusted as possible to the results of illness and the part the nurse can play through application of her knowledge, skill, and attitude in bringing about this adjustment are considered.
3. The students acquire knowledge and experience in the team approach to patient care and rehabilitation. This is enlarged upon in later experience, hopefully to motivate the young nurse to see herself taking some responsibility for providing continuity of care as planned by the team within the hospital as well as continuity of care between hospital and home.
4. They have increasing experience in communications between disciplines and in interpreting patients' needs to others and conversely their goals to patients.
5. Along with courses in sociology, psychology, growth and behavior and human relations, the basic student learns about people as people, family background, family's attitudes toward illness, and their feelings for the patient. She begins to learn to establish rapport, to teach patients and family members, to establish a climate conducive to patients and family desire for rehabilitation services.
6. Principles of posture and body mechanics for both patient and nurse, prevention of contracture, encouragement of self-care and mobility are presented and practiced as an integral part of nursing care. These principles are basic to many of the activities necessary in teaching handicapped homemakers.
7. Because an integrated psychiatric nursing program begins in the first year and terminates in the fourth year with an intensive psychiatric nursing experience the student has opportunity to develop self-understanding and skill in supporting patients in their feelings. This certainly has implication in the development of a dynamic philosophy underlying any rehabilitation activity for any person.
8. From the beginning of the educational experience, a problem-solving approach is utilized. Students learn early to analyze new situations, to assess needs, to set goals with patients and families.

During the clinical instruction in all areas, students have opportunity to apply knowledge and skill in practical situations. Some may have actual contact with a physically handicapped homemaker

and some may not, even during public health field experience. However, all clinical experiences are shared through seminar discussion. Students are encouraged to use library resource materials on rehabilitation of physically handicapped homemakers.

During the medical-surgical theory and practice courses, transfer activities, encouragement of self-care, mobility techniques, adaptation of equipment for self-care are demonstrated and utilized as appropriate to patients for whom the student is planning comprehensive care. Principles of body mechanics are re-emphasized as they apply to the nurse's responsibility in patient teaching; especially in relation to the homemaker who must conserve her energy because of heart disease, orthopedic or neurological disability.

The two nutritionists on our school of nursing faculty participate actively in both theory and clinical courses. They integrate graded material from the sophomore year on through the senior experience.

Some of the senior students during their experience in long-term illness have opportunity to plan with paraplegic mothers home adaptations and possible future adaptations for homemaking activities. However, opportunities to work with female patients during their hospital experience are limited in the particular agencies we use since a Veterans Administration hospital and an industrial accident spinal cord injury service are utilized.

During maternal-child health theory and clinical courses, the students study growth and behavior, parent-child relationships, and play therapy. Most of the emphasis in maternity is on pregnancy as a normal process. I agree with these approaches. However, I also believe, that in this area of our basic and graduate curriculum we should do more in relation to the physically handicapped homemaker: for example, how the handicapped mother manages her well child and her other maternal activities. As a result of being asked to participate in this conference and my request for information from faculty members as to what is included in their particular curricula I have sparked an interest. I have been asked to plan with the maternal-child health faculty, for seminar discussion in relation particularly to child-care problems of handicapped mothers.

GENERAL NURSING PROGRAM

In addition to the basic baccalaureate curriculum which I have been describing up to this point, we offer a General Nursing Baccalaureate Program. Curriculum is provided for registered nurses who have obtained their basic preparation in hospital diploma schools or junior colleges. Both baccalaureate programs aim at the same goals. The general nursing program, however, is essentially a gap-filling program which strengthens lower division (freshman-sophomore) general education, adds upper division general edu-

cation and nursing courses. In this program, a special course in rehabilitation nursing is offered since these nurses have not had the opportunity of an integrated approach.

As I close this portion of my presentation regarding undergraduate programs, I believe that a graduate of either the basic or general nursing programs would recognize the problems of the handicapped homemaker, could problem-solve some situations, would have basic skill to teach some of the simple activities indicated but more importantly could and would know where and from whom to seek help in more difficult situations.

GRADUATE PROGRAMS

At Boston University School of Nursing graduate education in nursing is concerned with the characteristics of graduate education in general, the special characteristics of professional education and the development of the individual's potentialities.

Graduate education in general keeps in step with the requirements of a changing and expanding cultural, social, and economic order. It emphasizes specialization, mastery of a particular area of knowledge, independent study, and an orientation to research methods. Professional education develops among its members a sense of responsibility for human welfare in cooperation with lay and allied professional groups. The characteristics of professional education in nursing include mastery in nursing practice and preparation in teaching, supervision, administration, or clinical specializations. Thus, it supports the belief that professional people use their knowledge for practice in the service of society.

Fundamental in the development of individual potentialities is the belief in the inherent worth of the individual and the dignity and value of human life. Programs in the School of Nursing attempt to facilitate the maturing of the individual, widen horizons, increase competence to solve problems by systematic investigation, and recognize responsibility to contribute to, and move beyond, the current state of knowledge.

Programs for graduate nurses leading to a Master of Science degree or Certificate of Advanced Graduate Study are designed to assist well-qualified nurses, holding an approved baccalaureate degree, to obtain the additional preparation necessary to practice a high quality of nursing and to assume positions of leadership in nursing.

Graduate students may elect to enroll in a clinical specialization program of study in the following areas: maternal-child nursing, medical-surgical nursing, rehabilitation nursing, adult psychiatric nursing, child psychiatric nursing, public health nursing, or gerontology. The graduate student may also combine her program in the

clinical specialty areas mentioned with a functional area of teaching, administration, or supervision. All programs require satisfactory completion of a field study as well as satisfactory completion of a minimum of 30 semester credits for graduation. Most programs, because most students prepare in two areas, require three semesters for completion of their program and most students graduate with 40 to 45 graduate credits.

I shall describe only the Rehabilitation Nursing Program since it is the clinical area in which the greatest emphasis is placed on the care of physically handicapped homemakers. Since I direct this program, it is also the one with which I am the most familiar. However, I do assist in the integration of some of the concepts of rehabilitation in the graduate programs in public health services, administration, and medical-surgical nursing.

The Rehabilitation Program

The rehabilitation program prepares the nurse who is qualified for a leadership role in the rehabilitation aspects of nursing. Opportunities are provided for the student to develop competence in the practice of rehabilitation nursing in varied situations and to develop skill in interpersonal relations and communications which will assist her to function effectively as a member of a multidisciplinary rehabilitation team.

Selected subjects are required which include specific rehabilitation nursing theory and practice in selected community agencies, seminars in rehabilitation and rehabilitation nursing, and graduate courses in behavioral sciences, human relations theory, statistics, and research method. Students participate in multidisciplinary rehabilitation courses in the university.

All students enroll in my four-semester-hour course of Directed Study in Rehabilitation. This is a formal 60-hour course in which students *study* in depth, out of class, the problems associated with dysfunction of the body resulting from injury or long-term illness. The basis of discussion in class sessions is the disuse phenomena. The formal sessions are utilized to reinforce and clarify learning, to present scientific principles, and to make practical applications within a laboratory setting. The laboratory sessions are conducted in a field agency as well as in the School of Nursing to assist the student to perfect selected advanced rehabilitation nursing therapy skills. These skills are further strengthened during the clinical field experience as the student plans her nursing care around the problems presented by her patient.

Students also participate in a three-semester-hour course of Rehabilitation Nursing Field Instruction.

Each student spends a total of 180 clock hours in a clinical field

experience in rehabilitation hospitals or in a public health setting, as well as one- or two-day experiences in specially selected agencies within the community.

These experiences provide an opportunity for the student to evaluate the nursing needs of severely disabled patients; to activate nursing and rehabilitation team care plans; to evaluate patients as to their potential for rehabilitation, their motivation and progress or lack of progress in the rehabilitation process; and to develop skill in relationships with patients and other personnel involved in the patient's program of care. Emphasis is placed on the role of the rehabilitation nurse in patient and family teaching, in planning for continuity of care, and utilizing resources within the hospital and community for the patient's well-being.

The rehabilitation nursing faculty members plan, direct, and supervise this experience in the clinical settings. Agency personnel cooperate in the learning experiences.

All students also enroll in a three-semester-hour Seminar in Rehabilitation Nursing:

Through seminar discussion, opportunity is provided for each student to explore rehabilitation as a concept, a goal of care, a multi-disciplinary process and to develop her own philosophy of rehabilitative nursing and role relationship. As a group, and by correlating the courses, students have opportunity to develop: (1) a greater depth of understanding of the principles involved in providing rehabilitation services for patients; (2) increased judgment in the application of knowledge and skills to rehabilitative nursing situations; (3) a broader and deeper appreciation of the relationship of local, State, national and international needs for and endeavors in the field of rehabilitation; (4) an increased sense of responsibility to work with nursing and other professional and citizen groups in studying, planning, and activating rehabilitation activities; (5) a heightened sense of responsibility and enthusiasm for assuming a leadership role in rehabilitation nursing.

These constitute the rehabilitation nursing core—the courses are correlated in such a way that the students do have considerable opportunity to apply knowledge, skills, appreciation to care of disabled homemakers in the following way:

1. They become skilled in teaching self-care to patients and family members and in applying the principles of posture and body mechanics in activity and rest, including applications to home management, daily living and work activities.
2. They develop and utilize basic principles of work simplification.
3. They develop visual aids and are supplied and become familiar with all the teaching aids I am familiar with. These include the

areas of food preparation and child care, one-hand activities for self-care, improvised as well as purchased equipment for self-care and homemaking activities.

4. They become familiar with research and demonstration projects being conducted in the area of the handicapped homemaker.
5. They consider clothing for the handicapped homemaker as well as clothing for children.
6. They are encouraged to become familiar with community resources available for the referral of patients.
7. The area of motivation for interdependency, underlying all rehabilitation, is studied in depth and applied as indicated to the homemaker. A total of six clock hours is also devoted as a separate unit to the handicapped homemaker, at which time the student can focus all aspects of her learning toward the homemaker.
8. They are exposed, through discussion and publication, to architectural barriers for handicapped persons which would include the homemaker. We also have been able to arrange for a handicapped homemaker to discuss her problem and their solutions with the students. We have two tape recordings we can use if we cannot arrange for the personal appearance. Students are exposed to materials in relation to home plans for the disabled.

They do see and discuss with patients and occupational therapists participation in homemaking activities in a rehabilitation center within a chronic disease center where there are a modified kitchen and laundry facility. However the set-up may not be comparable to the patient's own home. It may be too elegant, or it may not be elegant enough. We attempt to follow this experience with discussion of how one could teach the patient simple modifications needed in the physical set-up of the patient's home and in keeping with her budget as well as whom they could utilize as resource people when they need help. Students have a limited exposure to problems of the blind or partially blind homemakers through a short experience at St. Paul's Rehabilitation Center for the Newly Blinded. The proper heights and safeguards for the wheelchair patient, the ambulatory, or the semi-ambulatory patient are presented. It is hoped that in the actual home situation and when the student returns to a real work situation, she will be able to help in the teaching of patients of all ages and other nursing personnel and share with other rehabilitation workers in a give and take relationship. We also hope we have engendered enthusiasm and creativity in our graduates, whom, I know, feel a deep professional responsibility for spreading the gospel of rehabilitation nursing, and also a sense of community responsibility to share in program planning in rehabilitation.

On the whole, I believe that most of the graduates, who are dedicated young women, could and would cooperate and be helpful members of any group interested in planning and setting up in-service training programs and in developing resource materials for teaching homemaking activities.

Certainly the public health nurse, who has not been graduated from a rehabilitation nursing program, knows the importance of family, patient and family teaching, and community resources. She has a certain kind of "know how" not always found in some of the other rehabilitation team members. She could and should be utilized to a greater degree in research and demonstration projects concerned with the whole area of rehabilitation of the handicapped homemaker.

Materials developed by home economists have been of inestimable value to me in my teaching programs. We have utilized them as they have become available and have applied them to teaching all handicapped persons as the students have studied the particular needs of particular patients with particular problems.

Recommendations

As a former public health nurse and physical therapist with experience in both official and voluntary agencies in both urban and rural areas, I perhaps place more emphasis in the program I direct on the importance of rehabilitation of homemakers than do some other rehabilitation nursing faculty members who are more hospital oriented, for I know what homes are really like. We—all professional groups involved in rehabilitation—need to encourage and to start more of our training and teaching of patients during hospitalization, based on what the patient's home is really like.

We need to teach children, who may have rather permanent residual disability, homemaking activities. We need to expand the teaching of geriatric patients to assume modified homemaking activities so that more of them can, following hospitalization for acute flare-up of arthritic joints, for fractures, "strokes," or other illness be returned to their own homes—be these in an apartment or in a housing project or a large house—able to resume some of their activities. It would appear to be desirable not to omit this phase of their rehabilitation so that fewer will need to be referred to another hospital or nursing home.

We need to think more in terms of what we need to teach handicapped men in the way of homemaking activities. In many instances, perhaps the wisest solution in certain situations, from a vocational point of view, might be a reversal of roles—having the handicapped husband remain at home and the nonhandicapped wife assume the role of breadwinner. We need to explore how we can help the

handicapped young girl plan for marriage and the role she desires as a wife, mother, and homemaker.

I am not attempting to spell out specific recommendations but rather have implied them. If spelled out, they would be similar to those developed as a result of the research project at the University of Connecticut. I would suggest that rehabilitation personnel need to: (1) conduct more studies on more of the activities involved in homemaking, (2) include in the study group more than the orthopedically handicapped, (3) include patients of all ages, (4) pool resource material for teaching homemaking since it is hard to find and hard to keep up with, (5) utilize when possible in projects (research, demonstration, or teaching) the "know how" of the rehabilitation nurse where feasible, and (6) use nutritionists in study or training projects since they know about therapeutic diets, research activities in family nutrition, and methods of teaching simplification of food purchasing, preparation, and budgetary aspects of planning adequate nutrition for families—a particularly important need when the homemaker is handicapped.

I believe that most of the students graduated from a specialty program in rehabilitation nursing could be helpful in future projects that might be considered in relation to clothing for the handicapped homemaker, particularly in relation to problems of incontinence.

Rehabilitation nursing faculty members might also be helpful to any group established to develop care or case studies about handicapped homemakers. Students develop excellent care studies which should be utilized to a greater degree. I think the studies done by these nurses include some of the early problems or aspects of care that might not be considered by other rehabilitation personnel.

I also suggest that we need to develop a guide of resources available for the referral of homemakers who need special training programs. All rehabilitation centers do not do as equally a competent job for homemakers as they do for other types of disabled patients. We need also to look at those centers that do an especially good job for homemakers and encourage them to conduct training courses for a variety of professional personnel who wish special or advanced preparation in rehabilitation activities for handicapped homemakers. I would like to take such a course as a basis for improving course content.

It is a privilege to share in the important deliberations of this multidisciplinary conference. Rehabilitation is generally defined to mean the restoration of a person after illness or injury to the highest possible level of physical, mental, social, and economic adjustment and functioning. Nursing is by its very nature deeply committed to this purpose. Nevertheless, we are indeed aware that continuing exploration of the meaning and nature of nursing and its

relation to the broad sweep of human problems, values, and knowledge is imperative if we are to realize the full potential of nursing for human betterment.

OCCUPATIONAL THERAPY

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IT IS EXCITING to be living in America in the 20th century, although all of us would agree readily that we have not reached the millenium. Scientific progress, sociological developments, and psychological advances have changed not only our mode of everyday living, but are reflected in the treatment concepts of the ill, disabled, and aged. But most important is the fact that we do not have to continue functioning at today's level; we can expect that tomorrow will bring additional opportunities. Not only can we anticipate further changes but we can contribute, each in his own field and in his own way. It is a wonderful age of many challenges.

In occupational therapy, there is one particular source that we are anticipating using as we build for the future. Data obtained in a recent curriculum study project is being organized rapidly for early distribution. The workshop technique will be used as one of the methods to disseminate the material to the 31 schools of occupational therapy and the approximately 250 affiliated clinical centers.

The length of the occupational therapy curriculum is related in some degree by where it is housed within the college or university. It may be in the Medical School, College of Education, School of Design, School of Home Economics, School of Arts and Sciences, College of Health Related Services, or School of Occupational Therapy. Besides the professional requirements, the number and type of credits which will be included in the degree prerequisites vary considerably from institution to institution. The majority of curricula are four years in length with additional nine to ten months required to complete the supervised practical experience necessary for registration.

A few schools have been experimenting with accelerated courses which can be completed in a total of four calendar years, including the clinical experience, rather than five academic years. The Bachelor of Science in Occupational Therapy is the degree most frequently offered by the various institutions. The degree may or may

not be awarded before the supervised clinical experience is completed, depending upon the philosophy of the institution.

Regardless of where the occupational therapy curriculum is located, a core of knowledge, which meets the American Medical Association and the American Occupational Therapy Association specifications, is essential. Over and above these professional requirements, courses in the humanities, behavioral as well as basic sciences, art, philosophy, and others are included in keeping with the educational concepts of the university. The goal, ever in mind, is as broad a cultural foundation as possible in conjunction with a functional knowledge of occupational therapy.

For today's rehabilitation programs, the prospective occupational therapist might be taught more than special treatment techniques. He learns to be appreciative of the roles and responsibilities of his associates in rehabilitation. He must have a sound, healthy attitude toward life which encompasses a concept of the individual's specific obligations to, and function in, society. He is cognizant of his own needs and goals so that he may be sensitive to the needs of others. He learns to use himself as a treatment tool. He is aware that each patient is a reflection of his own particular culture and must be treated accordingly. He values independence and seeks ways by which he may assist the patient to attain it maximumly. He recognizes that the patient is an extension of a family and of a community to which he will return. The occupational therapist must be able to utilize the resources of all three—patient, family, and community. He knows that activity is a basic human need which must be satisfied despite the restrictions of illness or disabilities. And most importantly, he believes that closely related to the need for activity is the individual's need for creativity.

In the years since World War II, occupational therapy as a profession has strengthened its curriculum and practice in the area of the physically disabled. As is true for the goals discussed above, there is considerable variation in the occupational therapy curricula as to the amount of time and stress that is placed on the problems of the disabled homemaker, including child care, and at what level these are offered. In the majority of programs, a survey of the general treatment aims for the homemaker is included in an orientation course in the freshman or sophomore year. The more specific instruction is offered on the junior and/or senior level. In over half of the occupational therapy curricula, this material is not isolated but is considered in the over-all treatment programs for the physically and emotionally handicapped. While approximately one-fifth of the curricula offer, in addition, one or more courses devoted exclusively to the disabled homemaker, all utilize the combined lecture and laboratory method of instruction.

The major areas covered are: therapeutic evaluation of home-making activities, appraisal of clothing and dressing needs, adapting equipment, constructing assistive devices, assessing commercial tools and equipment, and establishing energy-saving procedures through work simplification. Just as important as knowing how and what to do, the student must be aware of the frustrations and psychological trauma that accompany physical restrictions. Thus, they perform home-care activities from a wheelchair, they practice the same duties with one hand, and they repeat by utilizing the non-dominant hand or combine all of these in one effort. Basic to all of the above is the anatomical and physiological understanding of the problems involved.

The theoretical presentation and laboratory exploration are reinforced and expanded in the supervised clinical aspect of the occupational therapy educational system. In some instances, the two facets are under the jurisdiction of the same staff, as is true at the University of Illinois. However, in most cases, the clinical experience is offered in various types of hospitals affiliated with the college or university academic programs.

To insure the accuracy of the material contained in this paper, a five-point questionnaire was sent to all academic occupational therapy directors, two-thirds of whom responded. One of the requests was for a self-evaluation of that portion of the curriculum devoted to the treatment of the disabled homemaker. Three considered their offering as strong (Colorado State University, San Jose State College, and Wayne State University); one (University of Illinois) rated its program between the average and strong classifications; four considered theirs as weak but had plans for improvement; and the remainder graded their programs as average. All respondents specified how they would like to strengthen their programs.

Wishes and Recommendations

Not surprisingly, time is one of the major obstacles encountered when attempting to increase the depth of instruction in a basic program. Where and when the tightly scheduled curriculum would permit, additional time would be devoted to more independent experimentation and practice, broader reading, more frequent home visits, and to the development of additional home programs. Space and equipment run a close second to time when curriculum changes are envisioned. Assistance in acquiring the latter may be secured through a Federal grant but acquisition of space may be a more difficult matter. Another deficit is that of qualified instructors.

From the standpoint of curriculum content, the occupational therapy directors are interested in having the students attain an increased understanding of the psychological needs of the handicapped

homemaker, more information on how habit patterns are changed, greater knowledge of the fundamentals of work simplification, stronger science courses (physics in particular), and more experience in housekeeping activities per se.

Workshops, seminars, and special courses are a part of the continuing educational programs for the practicing occupational therapist. The study courses associated with the World Federation of Occupational Therapy in the Fall of 1962, the special courses available intermittently at the Institute of Physical Medicine and Rehabilitation, and at Colorado State University are examples of short-term opportunities for professional growth. In the long-term category, several occupational therapy curricula offer a master's degree which permits specialization in the area of physical disability. It is a matter of interest that two recent theses at the University of Southern California were "Homemaking for the Handicapped" and "Factors Affecting the Use of Arthrodeses by the Disabled Homemaker."

One recommendation for meeting the shortage of personnel for treating the disabled homemaker is to make a concerted effort to enlist the services of retired occupational therapists. Such persons have the fundamental medical, psychological, physiological, and anatomical background plus the personal experience of rearing a family. They need only to be oriented to the demands of current professional practice. Although divorced from the medical field for a number of years, they rapidly relearn the terminology and treatment principles involved in handling the ill and disabled. A second recommendation is that encouragement and direction be given nationally to strengthening, as needed, the individual curricula and clinical programs as related to the disabled homemaker. A third recommendation is that the cross recruitment in home economics and occupational therapy be encouraged.

EDUCATION FOR PHYSICAL THERAPY

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THERE ARE 42 institutions throughout the United States and Puerto Rico offering courses in physical therapy approved by the Council on Medical Education and Hospitals, American Medical

Association, and the American Physical Therapy Association. The greatest concentration of the courses is from the near Middle West to the East Coast, between the Middle and North Atlantic States.

The sponsoring institutions differ in purpose and facilities. Thirty-three of the courses are in universities with schools of medicine. Some of these have large, complex health centers; other medical schools use community hospitals as primary teaching units. In all cases, physical therapy students profit from the faculty and facilities of the medical schools. Four of the courses are offered by regionally accredited colleges which do not have medical schools but which have made special arrangements with medical schools or clinical facilities so that physical therapy students receive adequate general and professional education. Five of the 42 courses are sponsored by clinical facilities whose primary purpose is to provide services to patients. These five clinical installations have made arrangements with educational institutions so that students who enter without bachelor's degrees may transfer the work in physical therapy back to the institutions in lieu of the senior year on campus and obtain bachelor's degrees.

Goals of physical therapy education are developed and stated in accordance with the philosophies and objectives of the sponsoring institution. Bulletins show a variety of objectives and programs. Nevertheless, in general terms, it could be stated that goals of education for physical therapy are to provide learning experiences through which physical therapy students may grow into responsible adults and develop:

1. *Competency in the ethical practice of physical therapy*

This competency should be developed to the level at which a person may participate as a staff physical therapist proficiently. Elements of supervision have been taught so that with experience a staff physical therapist may move into a supervisory position and later into other positions of responsibility as an administrator or a coordinator.

2. *Abilities to recognize and enrich personal characteristics contributing to favorable, interpersonal relationships*

Physical therapists work in complex situations and need to develop and maintain favorable interpersonal relationships with a great variety of people, such as patients and their families; co-workers including physical therapists, physicians, nurses, administrators, and persons in other allied health fields; clerks and stenographers; and persons who work with physical therapists as aides, orderlies, porters, and housekeepers.

3. *Appreciation of community needs*

We desire to have physical therapy students develop a social

conscience in order that they may take productive roles in their communities.

4. *Appreciation of the need of engaging in continuing study and experiences which lead to further personal and professional growth*

To attain goals, institutions have developed curricula with different general characteristics. Most of them are planned so that high school graduates desiring to major in physical therapy enter a four-year college program leading to a bachelor's degree. The first two years are of general education and include courses which most freshman and sophomore students take to fulfill degree requirements. Professional sciences and arts are taken during the third and fourth years. Some institutions schedule professional sciences and arts earlier and extend some of the general education into the junior or even senior years. Some institutions extend the program beyond the eighth semester. Three universities, through their graduate schools, offer the basic preparation for physical therapy to students with bachelor's degrees. In two, general and professional requirements are offered concurrently through two years; and in one, professional preparation is completed in approximately 14 months, and students elect to continue to completion of a master's degree or to accept employment and return later to finish master's requirements.

During the basic general education, physical therapy students gain the foundation for subsequent work in the professional sciences and arts. This includes at least two courses in psychology in addition to other social sciences which furnish physical therapy students with an understanding of man and his reactions to various situations. Classes in growth and development, psychology of the ill and handicapped, and psychiatry follow in later semesters.

Professional Requirements

Professional requirements with or after the period of general education are:

1. *Professional sciences*

- a. Human anatomy—6 semester hours
- b. Human physiology—6 semester hours

2. *Medical sciences*

- a. Pathology—2 semester hours
- b. Clinical medicine—6 semester hours

Dealing with conditions in the various medical specialties most frequently referring patients for physical therapy

3. *Physical therapy procedures, theory and practice—14 semester hours*

Principles are emphasized rather than repetitive practice of techniques.

4. *Clinical Experience—600 clock hours*

This supervised clinical experience in the care of patients is planned by faculty members of the college and its affiliating centers. It is provided by

qualified, experienced physical therapists on the staffs of clinical service departments of the institution's teaching hospitals and of other hospitals affiliated with the educational institution for this purpose.

It is at this time, if not earlier, that physical therapy students observe and work with patients in realistic situations of model kitchens, bathrooms, bedrooms, and living rooms. They teach activities customarily performed in homes in these areas, including stair-climbing, getting in and out of cars and buses, and walking on different kinds of surfaces.

Faculty teaching the professional requirements are physical therapists, basic scientists, and physicians. Roughly, the professional requirements include 45 semester hours of classes. Usually basic scientists teach approximately 33 per cent of these requirements; physicians, 16 per cent; and physical therapists, 51 per cent.

Physical therapists on the faculties of the 42 institutions number approximately 160, and those who participate in the clinical education required of physical therapy students number approximately 1600. Most of this larger group are employed by clinical installations which are affiliated with educational institutions especially to provide clinical experiences and instruction.

In 1962, the aggregate enrollment in the final year of preparatory study for physical therapy was 825 students, an increase of approximately 12 per cent over the preceding fall. During the past several years, the number of physical therapists graduated annually from all approved courses ranged between six and seven hundred.

Growth of Profession

In 1952, the American Physical Therapy Association had a membership of 5,520; and in 1962, had 10,153 members. This does not mean that the 10,153 are practicing physical therapists, for this number includes all categories of members. However, information from several sources points to the possibility of approximately 10,000 qualified physical therapists practicing in the United States and Puerto Rico. According to the 1960 Census, it can be estimated that there is one practicing physical therapist for each 21,000 persons; but this proportion varies from 1 to 13,000 down to 1 to 52,000 persons. Our physical therapy population, like the general one, is concentrated in and near metropolitan areas.

Our official organ, a monthly publication, is the *Journal of the American Physical Therapy Association*. It carries scientific articles, reports, and news of Association activities and announcements of professional and educational events and courses.

There are many opportunities through which physical therapists may attain continuing professional growth. Our Association has component units throughout the country, and these provide both

local and regional programs. Annually there is a national conference which serves as a refresher course besides providing opportunity to conduct the business of the Association. Numerous short-term courses are offered throughout the United States serving as refresher ones and also as means of developing broader information on specific subjects. Physical therapists have enrolled for graduate study in many universities, and following completion of master's and doctoral requirements, physical therapists continue either in clinical situations as clinician, administrator, or coordinator; or as teachers or investigators.

Seven institutions in the United States offer master's degrees in physical therapy to those persons who have already been professionally qualified. Physical therapists may elect to do graduate work in other fields; frequently chosen are anatomy, education, guidance, physiology, and psychology.

Scope of Professional Service

Although physical therapists practice in a variety of clinical and educational settings, most of them work in general or specialized hospitals. Many treat patients in their homes, help them adjust to these surroundings as needed, and make suggestions to patients which will help them carry on activities in their home and employment environments. Physical therapists are taught to assess abilities of patients, to provide specialized treatments, and to engage them in exercises or activities which will help them develop to maximum capacity gaining as much independence for living as possible.

Physical therapists are concerned with care of patients almost from the immediate time of illness or catastrophic accident to maximum recovery. Throughout this continuum, physical therapists have varying responsibilities. They are deeply concerned in assisting the patient to gain strength, range of motion, and skills which will permit him to roll over in bed, sit up; get from bed to wheelchair, to a standing position; to ambulate in ways which are limited only by the patient's capacities; and to become a productive citizen.

Physical therapists do not usually engage the patients in the specific actions which the home economists have so skillfully demonstrated at this meeting through pictures and films. Among all of the health personnel providing services to patients, different ones have major responsibilities at different stages in the recovery of patients; and although physical therapists treat patients who come to centers as out-patients, and treat many in their homes, the majority have responsibilities with patients much earlier in their periods of disablement. They play a responsible role in early recovery of patients and in helping to establish the kinds of rapport which lead to cooperation and drive for further progress. All are con-

cerned with patients gaining optimum recovery. As persons in other health fields also contribute during this same period, physical therapists participate in the cooperative planning necessary to provide the best care possible.

Inasmuch as the particular skills in homemaking activities, demonstrated so beautifully through pictures and films, are not generally taught by physical therapists, except perhaps in illustrating application of a principle, they do not pose serious problems to physical therapy. Realizing the number of persons serving patients in various ways gives basis for the following recommendation to the field of physical therapy—that experiences of physical therapy students be enriched so that they may better understand, appreciate, and respect the many contributions which persons in all health fields make in the total care of patients.

THE ROLE OF REHABILITATION COUNSELING

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OF ALL THE PROFESSIONAL fields represented at this Workshop, rehabilitation counseling is perhaps the youngest. Because the rehabilitation counselor represents a recently evolved specialty, and because he serves a wide variety of people and plays a great many roles, he is perceived in different ways. For these reasons it appears appropriate that we briefly discuss (a) the background of rehabilitation counseling, and (b) functions of the rehabilitation counselor today. With this introduction, we hope to define more clearly the role and the training of the counselor in the rehabilitation of the physically handicapped in homemaking activities.

THE BEGINNINGS OF REHABILITATION COUNSELING

Rehabilitation counseling, as we conceive it today, had its beginnings in advances in medical treatment during the second half of the nineteenth century; in philanthropies, health and welfare clinics, and initiation of the psychological testing movement at the turn of the century; in the vocational guidance movement and in legislation for compensation of injured workers a decade later; and finally, in legislation providing vocational retraining for physically

disabled veterans at the conclusion of World War I. This legislation was extended to civilians in 1920, and the next two decades saw the development of vocational rehabilitation agencies by all states in the Union.

During this period, rehabilitation counseling was considered to be those vocational guidance services necessary to retraining and placement of the physically handicapped. Awareness that other services were necessary to achieve this goal was growing, however, and with the advent of World War II further legislation made them available. Of particular importance was the inclusion of medical evaluation and treatment services and of maintenance and travel support during the rehabilitation process. Another milestone resulting from this legislation was the expansion of the nature of the group served to include both the physically handicapped and the mentally handicapped.

Thus, following World War II, the role of the rehabilitation counselor was considerably changed. A wider range of persons served and greater depth and scope of services performed pointed up the need for specially prepared personnel. The earlier practice of recruiting rehabilitation counselors from a diversity of backgrounds and then training them on the job was fast becoming uneconomical. Further, a body of knowledge was growing, and specialized training through an academic curriculum was felt to be timely and necessary.

The development of this curriculum was made possible by legislation in August 1954, barely more than eight years ago, when Federal monies were made available to colleges and universities for the purpose of instituting academic preparation in rehabilitation counseling. Although two universities had previously developed training in this area, the real impetus to curriculum construction in rehabilitation counseling occurred in 1954. Nineteen schools had initiated programs by 1955, and today there are some 35 throughout the country.

Building on research in counseling the disabled and on existing programs in both public and private agencies, a core of professional educators from psychology, sociology, social work, and other disciplines turned their efforts to the task of constructing a curriculum to meet the need for formal training in rehabilitation counseling. It has been a challenging and a tremendous task—one in which we grew through hard study, much work, and not a little disagreement. We are still feeling our way toward agreement for appropriate training, but as we collect followup data on our graduates and as research findings grow, we are able to come closer to our goal.

Before we discuss the rehabilitation counseling curriculum—and

attention given to rehabilitation of the physically disabled in home-making activities—let us review the current functions and role of the rehabilitation counselor.

THE ROLE OF THE REHABILITATION COUNSELOR

The rehabilitation counselor helps individuals with physical or mental handicaps make the most of their assets and potentialities in becoming productive persons. Problems encountered in developing productive goals with clients may be of a medical, social, psychological, or economic nature. The counselor must be knowledgeable in all these areas in order to carry out his main function, that is, helping clients toward economic independence.

Such a counselor must be capable of recognizing the total handicap which disability imposes on the client. He must be able to interact at a cognitive level, in a face-to-face relationship, with the client. His focus is on helping the client to accept irreversible disability, to develop a concept of himself in keeping with this reality, and to marshal his personal resources toward planning for and achieving a productive goal.

The rehabilitation counselor must be skilled in educational and vocational analysis; for instance, careful study of work history, job attitudes, work personality, vocational interests and aptitudes. He must know the world of work, such as types of jobs, the various physical, social, and mental demands for various jobs, qualifications and training resources, job opportunities, and individual needs met by different kinds of work.

With the above knowledge and skills, the rehabilitation counselor is in a position to help the client understand himself as a worker, and working in close liaison with the physician and other medical personnel, he assists the client to (a) develop vocational goals in keeping with his residual or restored assets, and (b) plan means for implementing these goals. Implementation of vocational plans brings the rehabilitation counselor in close contact with the social worker, the vocational trainer, the employer, and other community persons. While he is, at this point, an interpreter of information and an integrator of community and social resources, counseling with the client is carried on throughout the implementation of plans and the followup process.

It is apparent, then, that the rehabilitation counselor is first a counselor, with unique skills in vocational psychology and in community organization for rehabilitation of the handicapped. He is part of the rehabilitation team and depends on interaction with *all* other contributing disciplines in helping the client achieve the end goal of his rehabilitation program.

The Curriculum in Rehabilitation Counseling

To prepare personnel such as I have just described requires both range and depth in curriculum content. The curriculum is designed as a two-year master's degree program, and although variation may be found from school to school, the following general areas of content are common to most programs:

1. Academic preparation

a. Theoretical foundations in human behavior, assessment of behavior, and in counseling. Impact of disability on society and on the individual. Principles of rehabilitation, including history, philosophy, and organization. Study of community organization, disciplines contributing to rehabilitation, and inter-professional relations. Ethics and practices in rehabilitation counseling.

b. Foundations for specific skills in techniques of counseling, testing, diagnosing, case recording and reporting, medical information, jobs and the world of work.

2. Supervised practice in rehabilitation counseling.

a. A practicum, including directed observation and supervised practice, is an integral part of the training, and constitutes from 15 to 40 per cent of the curriculum.

b. A range of settings are used for the practicum, e.g., State and Federal vocational rehabilitation agencies, private counseling agencies, sheltered workshops, rehabilitation centers, voluntary health agencies, hospitals and clinics.

The Curriculum and "Rehabilitation in Homemaking Activities"

A recent survey of colleges and universities offering degrees in rehabilitation counseling reveals that preparation of students for working with clients in homemaking activities is based on the assumption that the counselor functions in this area just as he does in many other vocational areas. That is, he fulfills a counseling role, and, at times, information and coordinating roles.

As specifically applied to homemaking, his counseling activities may be directed toward such things as helping a homemaker see herself as a homemaker again, a non-homemaker to accept homemaking as one of her new roles, a man to accept homemaking activities without damage to his masculine image of himself, or any handicapped person to develop motivation to achieve independence in activities of daily living in the home. The counselor may help some clients develop and plan for homemaking as a vocational objective—as a "job," remunerative or not, for which the client may prepare. He may assist in locating resources for training in homemaking skills and in activities of daily living. Close liaison with trainer and client throughout such training is maintained.

Preparation of rehabilitation counselor to perform the above role

is acquired through such courses as:

1. Human behavior and psychosocial aspects of disability, which includes topics on personality change, alteration of self-concept and role adjustment.
2. Occupations and vocational psychology, which includes homemaking as an occupation, job analysis, work simplification and job adaptation. It should be noted that skill in analysis of demands of a task and adaptations which can be made are critical to selective placement in work—and are particularly useful as applied to activities in homemaking and daily living.
3. Directed observation in community rehabilitation facilities, which provides understanding of the many phases of the rehabilitation process, including therapy and training in homemaking.
4. Practice counseling, which provides the opportunity for the student actually to carry cases, some of which may have homemaking and daily living activities as the vocational objective, or as a part of it. This, however, is variable, depending on the field agency and the nature of the client group served.

Summary and Recommendations

The survey referred to earlier indicated that leaders in rehabilitation counseling do not expect preparation of counselors in homemaking rehabilitation to alter significantly in the future. It is expected that rehabilitation counselors will continue to work with client's rehabilitation.

As I noted in the beginning, rehabilitation counseling is a young specialty. We have gone a long way, but there are still miles to go. As our field grows and develops, we—educators, administrators, and counselors—have many responsibilities. Among them is rehabilitation of the physically handicapped in homemaking activities, and it is suggested that in this area, we need to:

1. Keep abreast of needs in rehabilitation of physically handicapped in homemaking activities and identify those which rehabilitation counseling can fill.
2. Review continually the curriculum to assure inclusion of those knowledges and skills the counselor needs in order to fill this role.
3. Encourage the development of services to make homemaking a more feasible and effective vocational rehabilitation goal, e.g., use of skills in job adaptation, development of resource files of personnel and facilities in homemaking rehabilitation.
4. Develop closer liaison with home economists in order to pool skills in homemaker rehabilitation.

BIBLIOGRAPHY

1. ANDERSON, R. P. The rehabilitation counselor as counselor. *J. of Rehabilitation* 24, No. 2 (1958), pp. 4-5.
2. CANTRELL, D. Training the rehabilitation counselor. *Personnel and Guidance J.* 36 (Jan. 1958), pp. 382-387.

3. HAHN, M. E. The training of rehabilitation counselors. *J. of Counseling Psychology* 1 (1954), pp. 246-248.
4. PATTERSON, C. H. The interdisciplinary nature of rehabilitation counselor training. *Personnel and Guidance J.* 36 (Jan. 1958), pp. 310-313.
5. WARREN, S. L. The rehabilitation counselor today: what, where and why? *J. of Rehabilitation* 25 No. 5 (1959), pp. 7-9.

SOCIAL WORK

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I WOULD LIKE to preface my remarks by saying that I tried to stick to the topic of the graduate program for social workers as it presently exists with no reference to the undergraduate program or to curriculum modifications which have been suggested as possibilities if schools are to meet the demand for more graduates. I have not attempted to define how the social worker performs in the rehabilitation of the homemaker with a physical disability, nor have I referred to the social and psychological factors in this rehabilitation process since their importance has been repeatedly emphasized during our earlier sessions.

When I was first asked to present to you content included in the educational program for social workers which would enable them to contribute to the rehabilitation of the physically handicapped in homemaking activities, my first reaction was to say, "There is none." I know this would hardly be acceptable and the many references to social workers during this meeting convinced me that there must be something. A review of the curriculum content in graduate schools of social work and my own experience in working in various health settings led to the conclusion that there is much in the graduate curriculum for the training of social workers which should enable them to give effective service to homemakers with physical disabilities.

You are familiar with the classification: psychiatric social workers, medical social workers, child welfare workers, group workers and other such designations. These describe the general nature of the clientele to be served, the mentally ill, the physically ill, children, and those in need of activity in groups. The social work educational program was formerly structured to prepare students to function in settings serving these specialized groups. Upon com-

pletion of the program, students were classified and supposedly qualified to practice in a specialized area.

The increasing complexity of our social structure, the ever-expanding body of knowledge being made available to all of the helping professions, and the demand for social workers in many areas of practice pointed to the need for change in this educational program if social workers were to function effectively in modern society. The findings of a three-year curriculum study by the Council on Social Work Education were published in 1959. As a result of this study, the present two-year graduate program, leading to the master's degree, is generically structured so that all students are given a core curriculum as a sound basis for practice in any setting. Specialization, as such, is not attempted in the classroom curriculum. It comes, if at all, in the field instruction which is a required and important part of the educational program for social workers.

I do not think that we can honestly say that the problems of homemakers with a disability are given specific attention in the training of social workers. However, there is much in the present curriculum, both class and field, which should enable social workers to be helpful to disabled persons whose proper social adjustment and satisfying life is dependent upon their ability to engage in homemaking activities. By describing, although briefly, the curriculum content, I think it can be shown that such help can be expected.

Curriculum content in schools of social work is usually divided into three sequences: Human Growth and Behavior, Social Services, and Methods, although schools may vary in the exact titles. Research is included in the core curriculum through the thesis requirement, individual or group. There is no attempt to prepare students as researchers but rather to prepare them to become intelligent consumers of research findings.

The very title, Human Growth and Behavior, is descriptive. It invariably covers the life cycle, the developmental stages from birth to death. Content includes normal and abnormal behavior, individually and within the context of the family, illness and disability, interpersonal relationships, and cultural influences. In the Social Services sequence, students are given a thorough grounding in the social welfare services, both public and private. The content in this sequence not only covers the resources available to people in need, i.e., the various programs designed to meet social, psychological, medical and economic needs but also legislation for social welfare programs, that effected, that proposed and that desirable—and also social action necessary to improve social welfare services for the betterment of all. The Methods sequence makes use of the case method of instruction. In it, students learn to apply the theoretical knowledge presented in the other two sequences.

Surely, the social worker needs to understand the impact of disability upon the patient, the family and the community and this understanding derives, in a large measure, from the Human Growth and Behavior sequence. It is here, perhaps, that students have the greatest exposure to the philosophy of rehabilitation and learn that its principles are applicable to all to whom they may be called upon to give service. They need to know the factors underlying human behavior, factors influencing the development of the personality, developments expected within various age groups and the meaning of illness and disability, if they are to enable the handicapped person to make maximum use of his own abilities and utilize all available resources in doing so. Accurate diagnosis of the social situation with which the social worker attempts to deal demands an understanding not only of the individual but of his environment and his interactions with other persons. Only through such understanding can the social worker participate in determining a goal attainable through comprehensive services, the kind of services more frequently than not required by a person with a disability.

Resources available to meet the problems created by illness and/or disablement should be in the body of knowledge acquired by all social work students. Disability is certainly disrupting to a normal life, not only to the affected person but to his family. Few can meet the problems it creates and aggravates—physical, emotional, economic or social—within their own immediate family resources. Further, seldom can the problems be met through one source, either through a member of one professional discipline or through one agency. Social workers, hopefully, learn to work with others and to strive for co-ordination of community services, in short, to know through what sources required services can be brought to the person with a disability. They need to know and to encourage the development of services which may be lacking and help to make them available.

Study of cases involving persons with a disability, some of which are always included in the Methods sequence, enables students to see the problem of disability in the totality of the situation. Not every type of disability, nor every age, economic or social group, can be represented, but concepts of disability are so presented as to provide a framework for effective practice.

Field Experience

Thus far I have discussed some learning experiences which social work students have in the classroom but, as noted earlier, a field experience, or practicum as it is called by some in other disciplines, is an integral part of the educational program. Students are placed for specific periods in a social welfare agency under a qualified

supervisor. This experience is closely tied to the class content and students operate at various levels during it. Since nearly every social agency numbers among its clients persons with physical disabilities, it is reasonable to suppose that students in field instruction have some exposure to the problems created by a disability and the means available to alleviate such problems. Students receiving stipends through the Training Grant Program of the Vocational Rehabilitation Administration are required to have at least a one-year placement in a rehabilitation setting. This is broadly defined but briefly can be said to be one which does serve disabled persons and uses a multidisciplinary approach in serving them.

The preceding discussion gives a brief overall view of the learning experiences of social workers which may be related to persons with disabilities. Among such persons are those who can be expected to assume or resume homemaking activities. Unless a student has had a field placement where homemakers with disabilities are given specialized services or has studied, in the methods course—a case where the handicapped homemaker is the focal point for learning—it is obvious that the educational program in no way emphasizes this particular group of disabled persons. However, it is hoped that the broad concepts of rehabilitation have been so inculcated that the social worker brings to his work with a disabled person whose rehabilitation goal is homemaking a proper attitude and enough current knowledge to lend support and encouragement to the homemaker and her family and help motivate her to respond properly to those trained to give specific help in this area. I have referred to the homemaker as of the female gender although I am aware that homemaking activities are not limited to women. I recall one case where the final treatment plan resulted in the father who had a disability remaining at home and carrying a fair share of the family responsibilities while the mother took remunerative employment outside the home. This may not be the usual situation in our culture but in this case it was the best plan and the one desired by the family. In another case, a 75-year-old single man returned to keeping his own home after having had a stroke and was highly motivated to perform as a homemaker in spite of limited abilities.

As in any profession, social workers develop special skills and competencies from performing the functions for which the agency in which they are employed is set up. However good an educational program may be it only becomes meaningful when the student applies what he has learned to practice. He builds additional knowledge, skills and techniques on a sound educational base reinforced by experience on the job. Field placements may stimulate some students toward a particular field of practice—health, psychiatric, family, public welfare, for example; others enter graduate school

with a specific interest and maintain it into their choice of employment. Those who enter the health field—hospitals, health programs or rehabilitation centers—can be expected to learn some of the specifics of homemaking activities which are within the capabilities of a person with a disability. Their education should enable them to evaluate a home situation, emotionally and physically, analyze, evaluate and stimulate motivation, enlist co-operation of other family members if there are any, utilize community resources, and work with members of other disciplines toward the fulfillment of the rehabilitation goal. Often their experience and the knowledge they have gained from other professionals serving the person with a disability will permit them to give direct service to the person in this area. While this is not the supposed area of the social worker's competence, in this day of staff shortages, and limited resources in some geographical areas, it often becomes necessary.

Social workers can acquire knowledge of how to rehabilitate disabled persons for homemaking activities in many ways. Among them are: participation in staff conferences, working closely with others serving disabled persons, keeping abreast of current developments through reading, observation and maintaining an "open mind," and attending courses, institutes or conferences devoted to this topic. In my own experience, I remember learning a great deal by attending a series of work simplification classes conducted by a local Heart Association.

The emphasis on rehabilitation throughout the whole field of social welfare today should result in students in schools of social work having enough background to enable them to adopt the philosophy and be aware of the methods of rehabilitation available to the homemaker with a disability. They, as well as those workers who have been out of school for many years, could extend their influence in this area by including content concerning the disabled homemaker in their institutes for on-going professional education. Also, with a hoped-for increase in the number of social workers interested in working in the field of health, it would seem that more will be exposed to the problems of homemaking by disabled persons and to the avenues of help for these problems.

I do not think that the formal education of social workers can or should include specific information on the rehabilitation of the physically handicapped in homemaking activities. The curriculum is already overloaded and conceptualization of broad problems, e.g., the concept of disability, which is our major concern, seems the only answer. The generic educational base plus proper attitudes, conviction about the philosophy of rehabilitation, and appropriate experience should enable social workers to function effectively in bringing adequate services to homemakers with physical disabilities.



A WIDE ARMHOLE HELPS A CHILD DRESS HERSELF

J. A. Manter, University of Connecticut, Photo

SECTION V

CURRENT RESEARCH AND DEMONSTRATIONS RECOMMENDATIONS FOR THE FUTURE—IN SOCIOLOGY AND PSYCHOLOGY —IN MEDICINE —IN HOME ECONOMICS

A REVIEW OF SOME SOCIOLOGICAL AND PSYCHOLOGICAL RESEARCH RELATED TO DISABILITY AND THE HOME

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THE MATERIAL I have included in this review of sociological and psychological research bearing upon the general subject of rehabilitation and the family is representative of the kinds of research and the topics which seemed to me of most importance. It is in no sense widely inclusive.

If research in the area of rehabilitation is to help increase our insight into physical and psychological processes, to help us find significant meanings in the crucial and evolving relationships surrounding the patient in his domestic and therapeutic circumstances, to discover facts and attitudes that are of significance in the restorative and retraining processes, then I believe we should attempt to take a rather flexible view of that which we classify as research. Research, in my opinion, should not be limited to descriptive studies, or to the testing of theoretical assumptions stated as formal hypotheses, or even to detailed empirical observations and records of one or more subjects over a genetic span of time. Important as

these approaches are and have been, we can afford to be more ample in our inclusion here. I strongly suspect that an intelligent and considered testimony offered reflectively by an individual who has experienced such concomitants of disability as pain, frustration, shame, rage, helplessness, and modification of crucial cultural sex roles, has a significance for the sensitive ear of a kind seldom found in probability tables and coefficients of correlation.

In this connection, one of the best suggestions I can offer is for everyone here if you have not already done so, to read the little book entitled *Experiments in Survival* (1) edited by Edith Henrich with commentary by Leonard Kriegel, whose own story appeared in the October 1961 issue of *Rehabilitation Literature*. This book is comprised of a series of classified personal accounts, written by disabled individuals. The classifications included correspond roughly to the stages of disability described by a considerable number of investigators. There is, moreover, little of the emotionally laden "inspirational" material that clutters a number of otherwise good autobiographical accounts. I am convinced that some of the best material for the study of human relations is to be found in fiction. Many of you are aware, I'm sure, of the considerable number of fictional accounts of families caught up in the implications of the physical disability of one of the members. Many such books are new and some quite old. For example, one book that has been of interest to me of late because of its relationship to some research we are engaged in at present dealing with the role modifications of the disabled male, is the book entitled *The Home-Maker* by Dorothy Canfield, written in 1924.¹ This book ends with a rather complete role reversal by the disabled husband and the able-bodied wife. The children have accepted the father as the homemaker and the mother as the breadwinner. The implication is that the two principals to the reversal have also accepted the new division of duty and have become emotionally committed as well as behaviorally committed to the new roles. In our research, we have found role modifications of almost all degrees, from relatively slight modifications, involving perhaps nothing more than a change in occupational status, to the dramatic reversal of the kind dealt with by Miss Canfield.

I have chosen to consider sociological and psychological research together, although in the interest of some taxonomic guidepost, it might be said that sociology is most characteristically concerned with the large-scale regularities among the chronically ill that can be perceived, categorized, and quantified. Psychology, on the other hand, might be most concerned with the highly specific and unique characteristics of the individual in his unique and peculiar situation. There is no gainsaying the fact that both are important and must

¹ Published by Harcourt, Brace & Company, New York.

be dealt with in the framework of medical care and comprehensive rehabilitation.

Lawrence K. Frank (2) believes there is occurring a kind of revival of the Hippocratic concept of man and disease. Some of the ecological assumptions of Hippocrates are perhaps a little naïve by present-day standards, but the transformation, as Frank puts it, of such vague concerns as the danger of night air, the miasmas, and the whole gamut of folk medicine into carefully controlled investigations of modern epidemiology, areal studies of incidence and severity, and the ever-increasing number and variety of environmental factors now recognized as significant components in the understanding of disease, attest to the importance of the present-day expression of the Hippocratic view.

The considerable number of health-related demographic studies—for example the well-known Kansas City Health surveys—and, in fact, the whole public health operation, could in a sense, be crammed under the tent of that which sociologists claim as sociology. The increasing trend which finds sociology becoming a specialty in schools of medicine, attests to the significance of the developing relation between medicine proper and the sociocultural factors related to medicine.

One of the most comprehensive reviews of sociocultural factors in relation to health and disease has been done by Edith Chen and Sidney Cobb (3). Chen and Cobb review well over a hundred studies in relation to family structure and health. Such variables as parental deprivation, number and position of siblings, marital status, and so forth, are considered in terms of their bearing upon disease and health. However, Chen and Cobb do not attempt to explore the effects of disease and disability on the family structure.

The relative merits of a home environment versus a hospital or institution environment have been the subject of a number of studies and debates. Some persons feel that we have been too glib and philosophical in uncritical recommendations of home environment for patients. Cynthia Deutsch and Judith Goldston (4), for example, question the assumption that patients are better off in the home environment and also the assumption that vocational training should be withheld until the patient has been released from the hospital and is either in a home or a sheltered workshop setting. They suggest that home placement be more selective than it has been in many places to date and that vocational training should be commenced before the patient returns home. This proposal is in the interest of incentive, motivation and a more adequate self-concept. The selectivity should be based, they feel, on role and responsibility variables. A comparison of subjects in their study who went home from the hospital and those who chose to remain, revealed that those who

could return to meaningful social and occupational roles in their homes were likely to want to return. The fact of a meaningful role awaiting their return was found to be more predictive of return to home than were the actual physical disability factors.

Wives and mothers were found to be able to take up a meaningful life more readily than were men. Deutsch and Goldston reported that handicapped homemakers lost considerably less of their "perceived" value than did handicapped men. Husbands and children of handicapped homemakers reflected a definite need for the mother as a kind of coordinator and hub of family affairs. This finding corresponds very closely to the "enabling role" described by Christopherson as follows:

The homemaker for whom the likelihood of regaining appreciable physical capacity is slight, presents a special problem. She is severely limited physically. How can she form a worth-inducing identification with the basic home-making role when so many of the tasks and responsibilities of the role are beyond her physical capacity. One solution reflected in varying degrees by a number of the subjects interviewed indicated that they had assumed what might be designated as an enabling role. . . . The enabling role is subtle and difficult to describe; however, the 15 severely handicapped homemakers who most clearly manifested the enabling role seemed to have had the majority of the following behavior characteristics: They were cheerful and optimistic; maximized their emotional rapport with their children and husband; took an active, responsible part in family decisions; encouraged other family members in the new division of labor and rewarded them with cheerful praise and humor. In addition, their comments indicated that they had faced up to the prognoses of their conditions and no longer had unrealistic hopes or were sensitive to the cosmetic aspects of their conditions. (5)

Variables in Reaction to Pain

Somewhat consistent with our earlier characterization of a sociological approach would be two very interesting studies of reaction to pain and disability respectively in terms of sociocultural variables. A rehabilitation worker who is not sensitized to the approach of perceiving the patient first from the general and only finally to the specific, is, I think, improperly trained. Rehabilitation personnel might do well to re-read their Sherlock Holmes adventures. Sir Arthur Conan Doyle capitalized magnificently upon convergent thought patterns, reasoning from the general to the specific. Sociocultural factors might well represent that place in or part of an individual's general life space from which we begin our rehabilitation detective work. Victor Sanua (6) studied the behavior of several groups of aged persons in terms of their reactions to amputation. His subjects included groups of Jews, Old Americans, Negroes, and Irish—all of low socioeconomic status.

When told that a leg must come off, more than three-fourths of the Jewish patients were quite seriously disturbed, bitter, and unhappy at the news. Seventy-five per cent of the foreign-born Jews

could not hold back the tears. Not a single native-born Jewish patient, however, cried. Sanua cites this as an instance of acculturation in the Jewish group. Tears are not considered proper for males in the dominant American culture. When I read Sanua's study, I was reminded of the words of a Russian friend of mine whose eyes filled with tears while telling of his war experiences as a prisoner in Germany. He interrupted his account to apologize, saying, "Excuse me, I know Americans do not like tears."

The majority of Old American patients seemed to have a fatalistic attitude, and the Irish group had a similar, stoical, philosophical attitude about the amputation. The Negroes were apprehensive but felt they had to go along with it since they did not have much choice in the matter.

Zborowski (7) in a somewhat similar study, was concerned with ethno-cultural groups in terms of their reactions to pain. His subjects were comprised of Jewish, Italian, and Old American stock.

The Jewish patients tended to provoke worry and concern in their social environment as to the state of their health and the symptomatic character of their pain. They were concerned with the long-range implications of their conditions. The Italians tended to provoke sympathy toward their suffering. The Old American stock differed from both the others in being more detached, stoical, and less emotional about the pain. Zborowski states that "Similar reactions to pain manifested by members of different ethno-cultural groups do not necessarily reflect similar attitudes to pain. Reactive patterns similar in terms of manifestations may have different functions and serve different purposes in various cultures." He also points out that in the relationship between the doctor and his patient, the respective attitudes toward pain may play a crucial role, especially when the doctor feels the patient exaggerates his pain, while the patient feels the doctor minimizes his suffering . . . (thus) the understanding of the significance and role of social and cultural patterns in human physiology is necessary to clarify those aspects of human experience which remain puzzling if studied only within the physiological frame of reference.

Zborowski's study has been of considerable interest inasmuch as we have just submitted a project detailing a somewhat similar study of pain and its consequences at the University of Arizona. Whereas Zborowski studied sociocultural factors involved in interpretation of pain, most other studies fall under three main categories; i.e., those dealing with experimental pain, produced by artificial, noxious stimulation—dolorimeter studies, for example; those dealing with post-operative pain; and those dealing with cancer pain. We are studying severe chronic pain and particularly that experienced by rheumatoid arthritics.

Arthritic pain generally signifies neither approaching death, as might be the case with cancer pain, nor rapid recovery, as is often the case with wound or operative pain. Rather, in the early stages, rheumatoid arthritis pain indicates the presence of the disease and the need for treatment and rest. Somewhat later, the pain indicates progressive deterioration of the joints and mechanical destruction. Many arthritics who have experienced a good deal of such pain, make a very constructive adjustment to life and somehow manage to learn to live with it. Others succumb rather early in the process. Although some of the causes for this differential response seem obvious, we are attempting to identify and isolate those qualities characteristic of and/or concomitant with both types of response. We assume that our findings may have importance for rehabilitation counseling, and, in a general way, have implications for adjustment within the home and family setting. Some of the hypotheses under investigation are as follows:

1. Pain thought to be destructive or life-threatening is felt more than pain thought or known to be mechanical, residual, or otherwise relatively harmless.
2. Mental and physical activity diminishes the perception of and response to pain.
3. Patients with different emotional characteristics have correspondingly different responses to pain.
4. Previous pain experience alters response to present pain in demonstrable patterns, for example:
 - a. Where no appreciable amount of pain has been experienced previously, present pain assumes an exaggerated significance to the patient.
 - b. Pain suffered in prior surgery or accident tends to influence the patient toward a more realistic attitude toward present pain.
 - c. Pain suffered earlier in a life-threatening or other extreme situation causes the patient to attach exaggerated importance to present pain.

These are but a few of a rather considerable number of hypotheses under investigation. Our study will attempt an experimental conditioning response in the direction of decreasing the significance of pain as an obstacle to productive work and adjustment. It is too early to say whether we shall be able to obtain the support we have requested for this study.

It would seem to behoove us to obtain and apply as wide a spectrum of knowledge about the patient as possible. Included in this spectrum would be an orientation to such general sociocultural factors as social class, ethnic characteristics, religion, race, and possibly region. Next, some sophistication as to the nature of the family in general in our society and as affected by the particular sociocultural elements for the individual, would seem to be in order.

Family Reaction to Stress of Disability

Talcott Parsons (8) suggests that the special character of the urban American family renders it peculiarly vulnerable to certain types of stress and strain. He suggests that the *affect* balance of the American family is at such a pitch and so delicate that the imposition of disability or chronic illness often serves to throw it seriously out of kilter. Moreover, Parsons suspects that the resentment other members of the family feel as they take up the disabled's burdens and assume the added care role, often drives the ill person deeper into his disability or illness. On the other hand, Parsons believes the increased attention and the sanctioned culture of the sick status often serve to enforce the psychological investment in the disorder.

Actually, Parsons seems to be concerned with the inability of the family many times to succeed in the attempt to evolve a productive complementarity of roles as a result of the abandonment of certain instrumental roles by the disabled or ill individual. Second, he seems concerned with what have been called the secondary gains of illness. Concerning the secondary gains, he suggests that inasmuch as the state of illness is partially and conditionally legitimized, the failure on the part of the disabled or ill person to perform his normal functions is not his fault and he is accorded the right to exemption, and, also, the right to service and care. This very fact, Parsons points out, highlights the dangers of too frequent use of this status as an avenue of escape from the independence and high level of activity demanded by our culture.

When we speak of "the" family environment, it seems probable that we have, ipso facto, resolved the many possible sociocultural variables into the majority type American family, which is something like Protestant, middle-class, Caucasian, Anglo-Saxon, nuclear, and perhaps equalitarian. In so doing we can to a certain extent communicate with one another because we are all probably making somewhat similar and simultaneous assumptions. However, the fact is that rather than a place of warmth, comfort, peace, love, and understanding, the family environment can be a maelstrom of stupidity and malevolence for any given individual. When it can be recognized as such, there is at least the advantage of seeing the opposition in stark lines and colors. Not infrequently, however, forces destined to reduce rehabilitation efforts to straw and rubble are cloaked in the garments of apparent love and selflessness. Douglas MacFarland (9) cites examples of the damage to rehabilitation that can be inflicted by the best intentioned and loving family members. MacFarland strongly encourages some social casework with families prior to rehabilitation with the subject himself. No doubt to MacFarland's observation would come a mighty chorus of "amens" from

the many rehabilitation counselors who have seen their efforts go up in smoke as the glimmer of hope they have given their clients is extinguished by the skepticism, overprotectiveness, or outright opposition of a non-sympathetic or non-capable family.

Marra and Novis (10), who investigated family problems in rehabilitation counseling in the state of Connecticut, suggest that counselors encompass the family unit within the counseling relationship and also that the counselor establish closer relationships with family counselors and social workers.

Not infrequently the patient himself at certain periods or stages of disability prefers an environment less surcharged with affect than the home. Frank Swartz (11), a highly intelligent and verbal individual who has been hospitalized a number of times with a severe case of rheumatoid arthritis, in an autobiographical document states that in his more prolonged and severe arthritic periods, he welcomed the dependable routine of the hospital and the society of the hospital personnel with its own, unique brand of objective humor.

Such testimony as this is not unusual, and it might well give pause to any who too readily become comfortable in and committed to their assumptions concerning the beneficial climate of the family. Certainly the family can be and often is beneficial to the member undergoing recuperation and rehabilitation. Even the most superficial statistical glimpse of family stability in our society, however, indicates that we have little basis for comforting platitudes or complacency. For example, divorce ratios, whether they are determined by a simple ratio of current marriage to divorce, divorces per 100 marriages, or divorces per 1000 population, or divorces per 1000 population 15 years old and older, they are grossly minimal in their implied estimation of family stability. First, divorce reflects structural failure only, rather than both functional and structural failure; second, divorce statistics completely ignore the approximately equally large number of desertions and separations. Therefore, we can assume without too much error that family failure is approximately twice that indicated by divorce statistics.

Many students of the family believe that the actual principal cause for family failure is lack of emotional maturity—this, notwithstanding the considerable imagination evidenced by the law in our some 51 or 52 jurisdictions by characterizing this quality in terms of so many different legal pegs or grounds. If almost one out of every two or three families suffers the lack of sufficient emotional maturity to function adequately—this estimate utilizes desertion and functional failures as well as divorce ratios—then what are some reasonable expectations for adequate emotional maturity among families to withstand the additional burden of chronic illness or disability? While, certainly, some would disagree, I cannot bring my-

self to be very sanguine about the likelihood that most families will have within their own untutored economy the emotional maturity to make constructive adjustments. Logically, disability is a crescive or additive factor, and will result predictably in a higher rate of family disorganization. This is the general picture. The specific indicates that both the family and the patient need help in working out their relationships.

As yet the institutional machinery provided to achieve this goal is spotty at best. For example, in some Vocational Rehabilitation agencies family social work is a part of the routine, whereas in most of the State and local offices such a service is given lip service as being desirable, but in fact is missing. I think we can both hope and predict that more research and demonstration projects will be forthcoming which will witness the arm of rehabilitation reaching out to include all family members.

Significance of Individuality

Much of the psychological literature dealing with disability and rehabilitation is, in one sense or another, a reaffirmation of the significance of the individuality of each patient. As I encountered this notion in so many places I experienced at once a sense of regret and a sense of satisfaction. My regret was that so many voiced the importance of the patient as an individual and so few dealt with the translation of this idea into concrete suggestions for rehabilitation. My satisfaction came from knowing that there was so wide a scattering of the seed.

The emphasis in literature on the individuality of the patient is summed up by a phrase suggested by Lawrence K. Frank—"The Patient As A Person" (2). Dr. Gudmund Harlem (12), Norwegian Royal Minister of Health and Social Affairs, states, "We have a type of slang in many medical institutions and among many rehabilitation workers, a type of slang which I feel is very dangerous . . . 'He is a cardiac.' Such a remark ignores the fact that the person is first a man or woman with all the complexities of the most complex creatures on the earth." Dr. Harlem goes on to state, "Such a remark is not only incorrect, it is dangerous, because it colors our thinking and his."

Certainly one of the research findings reported by Deutsch (4) and others (13), that bears out the truth of this assertion, is that there is little predictable relationship between the severity of the illness or disability and the effectiveness or adjustment of the person as an individual. Obviously, then, we have to go much beyond the crude classification of disability by mode or type of limitation.

Refinements must be made and taken into account that describe the person in a sufficient number of dimensions to enable those

charged with his welfare to perceive him and deal with him in ways that would be totally obscured by crude modal description and/or category. Thus the post-polio patient or the arthritic patient becomes, specifically, John Smith, with a certain degree of affliction, of a certain type in a certain body area, of a certain period of long-standing, and so forth. Moreover, John Smith has a certain level of intelligence that seems to be functioning at a certain percentage of capacity. John Smith had certain interests, certain needs, certain habits, certain priorities that are extremely important to his psychological and physical well-being and which can only be understood in terms of his own unique history.

One of the most comprehensive evaluation procedures undertaken to date is reported by Sokolow and Silson, et al. (14). Sokolow and his colleagues at the New York University Bellevue Medical Center have worked out a system of patient evaluation including such areas as identification data; medical and functional factors, psychological, social, and vocational data; activities of daily living; and other categories. The data is punched into IBM cards and, according to Sokolow, the system can be learned after only a few patients' data have been recorded.

Christopherson and Swartz (13) have attempted to identify the major dimensions of disability, measure them, and chart them in graphic form. Even though many qualities are nucleated into the several final dimensions, the result is obviously an oversimplification. However, when utilized along with whatever other estimates are available, such as medical reports, case histories, and the like, the result is, hopefully, a bundle of useful information of the sort that takes the idea of the "patient as an individual" into the next step. The dimensions utilized in this research are as follows: mobility, endurance, intensity, protensity, and autoviability. These dimensions are being utilized in patient evaluation in the Rehabilitation Center at the University of Arizona.

Behavior

One of the issues in rehabilitation—in a sense a philosophical issue—is whether the behavior of an ill or disabled person is deviant or normal. Some hold that the behavior of an ill person, since it differs from the behavior of the physically normal person in apparent and sometimes striking fashion, is a deviant sort of behavior. Others regard such behavior as a normal reaction to an abnormal or unusual situation. I prefer the latter perception, I think. Neither view, as such, will solve rehabilitation problems; however, viewing the behavior of the disabled as normal reactions to abnormal situations might set the stage for a healthier relationship.

We speak of "the behavior" as if it were somehow set apart and unique from all other behavior. This is not quite true; yet, there are sufficiently common aspects of the behavior of the physically limited at certain temporal and psychological periods of their disability that it has been worthwhile to try to characterize it in terms of stages. In about the same way that an understanding of the defense mechanisms of rationalization, sublimation, projection, reaction formation, etc., gives us an edge in understanding some of the human drama as it daily unfolds before our eyes, so an acquaintance with the stages of disability enables us to understand, anticipate, and provide for the stage-typical behavior and needs in disability. Admittedly, such concepts as defense mechanisms and stages of disability may do nothing more than provide convenient stereotypes and pigeonholes for the quasi-sophisticated. Safeguards to this hazard are a matter of training, intelligence, and application. Neither the stage concepts nor the precautions against their misapplication will ever be foolproof.

Salvatore G. Di Michael (15) has identified several such stages as follows: First is the stage called Regression. This initial stage is characterized by a state of shock, involving initial loss of energy, inability to think or to experience and react to the environment as one's own self. Regression also involves a sense of guilt of being punished for past sins. The person's mind is tortured by possible cause-and-effect relations between his past life and present calamity. Depression is also involved as the general or suspected extent of the disability is realized. The depression, Di Michael states, seems to be related to the failure to measure up to the whole body image, and, also, to the mourning or lament over things no longer possible.

The second stage is called Accommodation. This stage involves re-establishing a tolerable way of life. The patients feel and provoke forms of pity. They still feel guilt, depression, and hostility. The next stage is Adjustment; and the highest, according to Di Michael, is Integration. The final stage is characterized by active re-interpretations of disability so that it is incorporated as an unwelcome experience which has led to many positive values. During this stage the individual develops a belief in the dignity of the human spirit and gradually comes to have self-esteem.

Another investigator saw fit to employ such terms as the Acute Stage, the Reconstruction Stage, the Plateau Stage, and the Terminal Stage (13). The value in any such scheme lies in the usefulness of such concepts as tools for thought and as helps for matching need and nurture. Stages of disability might, hopefully, enable the perceiver to see the individual as moving in process rather than as having effected a static adjustment.

Family Reaction to Disability

An approach to the study of disability and the family that I did not review in any detail, but which certainly deserves consideration both in that research presently available for study and that which is to come in the future. The approach in view is that which studies reaction to disability on the part of the different members of the family involved—the study of the handicapped child, the study of the physically limited father, and the study of the handicapped homemaker. By implication the reciprocal adjustments of other members are studied as well.

If psychology and sociology have pushed the frontiers back in relation to the disabled child and male, I'm sure home economics deserves equal credit for its concern and work with the handicapped homemaker. Research findings are much more abundant in the instances of disabled men and handicapped children than in that of the handicapped homemaker, but information is accruing rapidly on the latter as well.

I believe we are at that point in our rehabilitation research where many of the assertions that appear over and over again in the literature can be accorded the status of truisms. A good example is the notion that the patient is an individual. We should now begin to focus our interest less upon reaffirming the obvious and more on building upon the foundational concepts. If the self-image has been found to be of significance, can we design research to mold the image in a constructive direction? In short, to a greater degree we need to go on to the next order of things.

Haimowitz (16) has described two modes of problem-solving thought; one convergent thinking, and the other, divergent thinking. Convergent is the more formal and conventional. It integrates what is already known. It unifies or harmonizes existing facts in a logical, well-organized, and orderly manner. Convergent thinking conforms to existing knowledge and exacting methods.

Divergent thinking, on the other hand, reaches into the unknown. Its essence is not orderliness, but originality. This type of thought may be, in a sense, more creative than the other. A rough equivalent might be imagination—too rare a quality in both rehabilitation and research.

Prescott Lecky (17), writing in 1951, utilized, I think, both convergent and divergent thinking in what seemed to me a provocative conception of the significance of the self-concept, and, also, in a means of modifying it. The results of the change as reported by Lecky were most significant. Essentially, his thesis is that academic failure is often caused by an effort on the part of the individual to maintain a role consistent with his image of himself. However, if he can be led to see that his particular area of failure is incon-

sistent with his perception of himself in other respects, he will attempt to modify his failure in a positive way. Lecky reports that this technique, skillfully employed, led to more reversals of academic failure than any other method, including tutoring and appealing to the individual on practical grounds, such as what study will mean in terms of material and job success in the future.

If Lecky's theory and method were shifted from academic reorientation to vocational or role reorientation, I believe a very worthwhile result could be obtained. Admittedly, I have oversimplified the example. I hope the point is clear—to build onto the research foundation already laid.

Another point much emphasized in the literature has to do with the importance of taking the family of the disabled or chronically ill individual into account in the rehabilitative process. We are attempting to do this in two projects at the University of Arizona. A part of this work was reported in the February 1962 issue of *Rehabilitation Literature*.

The second project is attempting to build on the assumption that the family members other than the patient, are involved in the network of effects resulting from the illness or disability, and, consequently, they should be involved in the rehabilitation process. We are offering an educational program for the patients and families of the chronically ill based upon a year's investigation of the families and situations involved. We are utilizing three disease models: asthma, cardiac and stroke, and arthritis. The intention is that the methods and materials evolved in the process will transfer to other chronic illnesses and to other communities. The project is being administered through the University's Rehabilitation Center, and the community agencies and physicians are participating and/or cooperating.

In closing, I should like to reiterate the fact that I have had to make many choices in selecting material for inclusion. However, in so doing, hopefully I have succeeded in directing some attention to that which has been accomplished, and, also, to that which remains to be done in the interest of better and more comprehensive rehabilitation.

REFERENCES

1. Henrich, E., and Kriegel, L. *Experiments in Survival*. New York: Association for the Aid of Crippled Children, 1961.
2. Frank, L. K. Psycho-cultural approaches to medical care. *J. of Social Issues* 8, No. 4, 1952, pp. 45-54.
3. Chen, E., and Cobb, S. Family structure in relation to health and disease. *J. of Chronic Diseases* 12, No. 5 (Nov. 1960), pp. 544-567.
4. Deutsch, C. P., and Goldston, J. A. Family factors in home ad-

- justment of the severely disabled. *Marriage and Family Living* 22, No. 4 (Nov. 1960), pp. 312-316.
5. Christopherson, V. A. Role modifications of the handicapped homemaker. *Rehabilitation Literature* 21, No. 4 (April 1960), pp. 110-117.
 6. Sanua, V. D. Sociological factors in responses to stressful life situations: the behavior of aged amputees as an example. *J. of Health and Human Behavior* 1, No. 1 (Spring 1960), pp. 17-24.
 7. Zborowski, M. Cultural components in responses to pain. *J. of Social Issues* 8, No. 4, 1952, pp. 16-30.
 8. Parsons, T., and Fox, R. Illness, therapy and the modern urban American family. *J. of Social Issues* 8, No. 4, 1952, pp. 31-44.
 9. MacFarland, D. C. The importance of family attitude in vocational counseling. *The New Outlook for the Blind* 51, No. 10 (Dec. 1957), pp. 443-445.
 10. Marra, J. L., and Novis, F. W. Family problems in rehabilitation counseling. *Personnel and Guidance J.* 38, No. 1 (Sept. 1959), pp. 40-42.
 11. Swartz, F. Family Influences on a Handicapped Member of the Family. Unpublished document submitted by request in connection with a research project entitled "Role Modification of the Disabled Male," Tucson, Arizona, 1961.
 12. Harlem, G., MD. The place of persons with disabilities in society. *Rehabilitation Record* 2, No. 1 (Jan.-Feb. 1961), pp. 19-21.
 13. Christopher, V. A. The patient and the family. *Rehabilitation Literature* 23, No. 2 (Feb. 1962), pp. 34-41.
 14. Sokolow, J., Silson, J., et al. Functional approach to disability evaluations. *J. Am. Medical Assoc.* 167, No. 13, July 26, 1958, pp. 1575-1584.
 15. Di Michael, S. G. Emotional Effects of Physical Disability on Religious Attitudes. Presidential address, delivered before the American Catholic Psychological Association.
 16. Haimowitz, N. R., and Haimowitz, M. L. What Makes Them Creative? In *Human Development: Selected Readings*. New York: Thomas Y. Crowell Company, 1960.
 17. Lecky, P. Preventing Failure by Removing Resistance. In *Human Development: Selected Readings* edited by Haimowitz and Haimowitz. New York: Thomas Y. Crowell Company, 1960, pp. 496-502.

FURTHER REFERENCES

18. Ackerman, N. W., MD. Toward an integrative therapy of the family. *Am. J. of Psychiatry* 114, No. 8 (Feb. 1958), pp. 727-733.
19. Aldrich, C. K., MD. Homemaker Service in psychiatric rehabilitation. *Am. J. of Psychiatry* 114, No. 11 (May 1958), pp. 993-997.
20. Barton, W. E., MD. Family care and outpatient psychiatry. *Am. J. of Psychiatry* 114, No. 7 (Jan. 1958), pp. 638-641.

21. Deutsch, C. P., and Goldston, J. A. Comparison of attitudes of hospital staff, disabled patients, and families toward basic concepts of physical disability. *Rehabilitation Counseling Bull.* 5, No. 1 (March 1962), pp. 169-179.
22. Deutsch, C. P., and Goldston, J. A. Patient and family attitudes and their relationships to home placement of the severely disabled. *Rehabilitation Counseling Bull.* 4, No. 4 (Dec. 1961)
23. Lederer, H., MD. How the sick view their world. *J. of Social Issues* 8, No. 4, 1952, pp. 4-15.
24. Masterman, L. E. *Psychological Aspects of Rehabilitation*. Kansas City Rehabilitation Experiment, Community Studies, Inc., May 1961.
25. *Rehabilitation Through a Domiciliary Program*. Final Report to the United States Department of Health, Education, and Welfare, Office of Vocational Rehabilitation, Washington 25, D.C.; Special Project RD229, Jan. 1958-Dec. 1960, 254 pp.
26. Spock, B., MD. *On Being a Parent of a Handicapped Child*. Chicago: National Society for Crippled Children and Adults, Parent Series, No. 8, 1961, p. 5.

DEVELOPMENT OF THE APPLIED SCIENCES TO THE HANDICAPPED HOMEMAKER

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PERHAPS THE OLDEST profession in the world is really homemaking. Ever since a stone-age mother had to make a place for her baby in some dimly lit cave, homemaking has been in the first place of occupations. A disabled mother must have had short shrift from the exigencies of the environment and the demands of a harsh life. To take a giant step in time from then to now, helping the incapacitated homemaker, as this conference testifies, is an established responsibility of the community. To render the life of the disabled useful is something that occupies the attention of many related professions. However, we are confronted with the need for fresh applications of various sciences to problems fairly well understood.

Before considering the exploitation of applied science in favor of the homemaker, let us look at these problems as embodied in the

various disabilities compatible with life but not, in their raw forms, with living. To understand with what we are dealing, we may first examine the categories of physical disabilities, each imposing its own peculiar handicap and solution. It is essential for success, of course, that the process of rehabilitation be personal and comprehensive.

Disability of Endurance

First, the non-orthopedic or hidden disability comes to mind. I prefer to couch it in positive terms; namely, the Disability of Endurance. This category includes both cardiac and respiratory disease which may lead to a state incompatible with endurance of even ordinary, able-bodied, physical activity. In the homemaker, the pattern of occurrence of these diseases limits us practically to heart disease, for functional incapacity of the respiratory system in the adult is seven to one in favor of the male.

The disability of endurance presents no motor impairment of itself to limit physical activity. Joint and muscle can respond to the will, and purposeful acts engage all limbs. What is lacking is an adequate increase of the pumping action of the heart to supply oxygenated blood to working muscles, in addition to the ever-present demand by brain, kidney, liver, and the heart muscle itself. In this condition, the cardiac reserve is restricted and, depending on the degree of restriction, various symptoms arise which imperiously interdict further activity. There may be a clutching pain in the chest (angina), awareness of an uncomfortable difficulty in breathing (dyspnea), a pounding rapidity of the heart (palpitation), and just plain fatigue.

Heart disease may be of slight degree and impair circulatory efficiency little or not at all. In these cases emphasis on restriction of activity may do all harm and no good by evoking psychological reactions of fear and anxiety. These of themselves are capable of producing increased but useless cardiac activity, thus simulating outspoken symptoms of cardiac disability. Every cardiac does not require regulation by a specific work prescription; but he or she does require an exact diagnosis and evaluation of cardiac reserve.

Our attention is focused on the person with cardiac reserve so diminished that she cannot easily sustain the metabolic activity of ordinary housework. The first phase is a physiological appraisal of the individual in her environment. One needs to know the intensities of various efforts involved in each particular individual's home situation, her upper limit of tolerance to effort for short periods of time without the onset of cardiac symptoms, the physical and social resources of the home, and her patterns and habits of work. The physiological phase really cannot be disengaged from the psycho-

logical and sociological determinants of the person in her microcosm, but these latter I leave to my able colleagues.

Motor Impairment

The second broad category of disability is Motor Impairment. Here the neural, muscular, or articular apparatus is at fault . . . the apparatus which makes us motile rather than sessile, reactive rather than passive. This category of disability ranges from fairly good motor capacity to complete paralysis. In some instances, though there is no inherent loss of endurance, effort involved in performing a motor act with a limited residue of apparatus is so tremendous that the person taxes even the normal cardiac reserve. A good example is ambulation by a person with paraplegia sustaining loss of spinal cord function above the level corresponding to the umbilicus or by a person with moderately severe polio (*1*). In such instances, it is better to resort to the wheelchair to conserve energy for useful work.

Motor disability occurs in various patterns, leaving aside the basic causative factors for the moment. In the hemiplegic, for example, a person may be one-armed, but able to navigate on her legs. We have mentioned paraplegia, paralysis or paresis of both lower limbs, which may allow ambulation or require a wheelchair. This device may be needed in other types of general disability in which use of the limbs is out of the question, as in arthritis. Thus, in terms of locomotion, we may have those with less than normal ability to walk about, with or without aids, and those confined to a wheelchair. Superimposed on these defects may be one-handedness, or two partially impaired upper limbs, or intact upper limbs altogether. Our best candidates will have reach and grasp unimpaired, regardless of the mode of ambulation.

A small proportion will display both disability of endurance and motor capacity. For example, an amputee or hemiplegic may have at the same time arteriosclerotic heart disease even further limiting her ability to perform work; a polio may also have some respiratory impairment as an additional limit to activity.

There may be instances in which disability in the true sense does not exist, but yet it is desirable to limit the duration and intensity of effort. A patient with apparently arrested tuberculosis, who is allowed home though still in treatment, is a good example. Here there is no impairment, but regulation is the mid-passage of caution between undue restriction and unrestricted liberty.

The Disabled

The magnitude of the disabled segment of homemakers in terms of sheer numbers alone demands the consideration of professions inter-

ested in rehabilitation. According to Lillian M. Gilbreth there were some $7\frac{1}{2}$ million disabled homemakers in 1955 (2). The relative proportions are given in table 1.

Table 1. Distribution of Disabling Diseases Among Homemakers

Disease	Number in Millions	Percent
Cardiac Disease -----	4.000	53
Rheumatoid Arthritis -----	1.875	25
Cerebrovascular Disease with Hemiplegia -----	0.650	9
Others with Motor Disability -----	0.800	11
Tuberculosis -----	0.175	2

Disability of endurance accounts for over 50 per cent of persons requiring help; motor disabilities are not far behind with 45 per cent. The national survey taken in 1959-1960 revealed that there are 5.8 million housewives with some limitation; and 15.5 million with chronic disease (3). There must be some persons in the latter group who could profit from principles of homemaking discussed here. Therefore, these two surveys are rather close in their estimates. Taking the figure of 36.5 million housewives in the country, it is fair to say that this conference may address its deliberations to 7 million handicapped women—that is, *to one of every five homemakers*.

Energy Expended and Work

One other point before discussing the mobilization of physical and medical sciences for the aid of the objects of our attention. Everything that aids the handicapped is designed to increase the external work performed with the least effort. But by external work, we mean not just any motion, we mean only useful work, with wasted repetitive motions eliminated. In physiological terms, one can designate the relationship between *useful work* (W) done and energy expended (Cal.) in a given period of time in a ratio which defines efficiency (E).

$$\frac{\text{Cal. per min.}}{\text{W per min.}} = E$$

In a young trained athlete, efficiency is as high as 23 per cent; in a 60-year-old physically fit man, it is three-quarters that of his younger competitor, i.e., 19 per cent (4). But this discrepancy holds only at very high efforts; at ordinary or moderate activity, the oldster is only 1 or 2 per cent behind in efficiency. However, untrained persons or those in less than optimal condition have a level of about 15 per cent. Efficiency of ambulation with braces and

crutches performed in paraplegia falls as low as 4 to 5 per cent (1). In hemiplegia, depending upon degree of recovery, the efficiency in walking may vary from normal to one-half of normal. The amputee also falls in this range; the decrement depends on the type of prosthesis (table 2). (5, 6)

Now from this simple formula, $\frac{\text{Cal./min.}}{\text{W/min.}} = E$, it is obvious that efficiency for useful work can be favorably affected in one of two ways. The numerator can be increased without affecting the energy expenditure per minute; or the denominator decreased with the same result in useful work. Any device or process that manipulates these two factors in the proper direction increases efficiency. Think of work simplification, labor-saving devices, work planning, etc., to this end.

One further point regarding the price of useful work in the handicapped. Disabilities of endurance and motion often meet upon the common ground of efficiency. The cardiac or respiratory cripple may not be able to carry out even ordinary activity, because his cardiac or pulmonary reserve is too narrow. Consequently, his work capacity is reduced. Therefore, the cost of useful work must be reduced to levels his functional capacity can afford. The motor-handicapped person, on the other hand, may be able to perform ordinary and even more than ordinary physical activity. But because inefficient substitutes replace impaired motor apparatus, ordinary activity may demand extraordinary responses of the heart and muscle (e.g., paraplegia) (1). (See figure 3.) Consequently, his work

Table 2. Relative Efficiency of Locomotion in Disability

Disability	Mechanical Aid	Efficiency
		Percent
Normal -----		20
A-K Amputee -----	Suction Socket -----	18
A-K Amputee -----	Standard Socket -----	16
A-K Amputee -----	Pylon -----	14
A-K Amputee -----	Forearm Crutches Only -----	11
Hemiplegia*		
Good Recovery -----		25
Hemiplegia		
Fair Recovery -----	With Cane -----	17
	Without Cane -----	17
Hemiplegia		
Poor Recovery -----	With Cane and Short-Leg Brace -----	11
	Brace Only -----	8
Paraplegia † -----	Crutches and Long-Leg Brace, Pelvic Band --	5

* Pace slower than normal.

† Swing-thru gait.

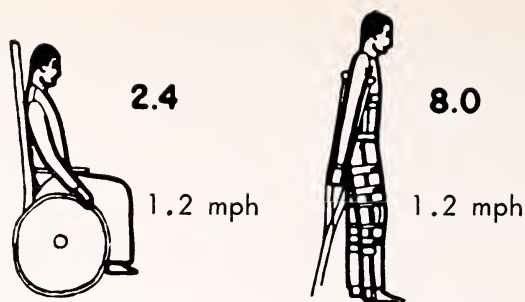


Figure 3. Energy cost in patient locomotion, in calories per minute. Reproduced with permission from *The Expenditure of Energy in Health and in Disease*. E. E. Gordon, M.D. *Medical Science* 3, No. 1 (Jan. 10, 1958), p. 16.

capacity is reduced. And consequently the high cost of working must be lowered in order to function usefully within his available resources.

The applied science that deals with the relationship between internal expenditure and external work is ergonomics. As applied to physical disability, to which I limit my presentation, it is concerned with optimal performance for the least energy requirement. Ergonomics embraces four basic physiological problems:

1. Determination of working energy expenditure and application to regulation of physical activity.
2. The study of work simplification.
3. The influence of environmental conditions upon body economy.
4. The study and control of emotional effects upon metabolism and cardiac work.

To begin with the fourth item, emotion and body. Psychophysiology is coming of age and is a proper subject of its own. Suffice it to say here that the heart responds to emotional stress much as it does to physical effort. Hence, portions of energy expenditure and cardiac work are wasted. This is only one aspect of the important psychological determinant of rehabilitation.

Environmental influences are insignificant for the homemaker. In contrast, cold, humidity, and heat present problems to farm workers. (7)

Work simplification principles form a major field of application to the homemaker. Mentioning this concept here is carrying coals to Newcastle. However, aside from time and motion studies, I should like to mention a few findings of recent vintage. Is it better to support a load with hip, shoulder, or arms? You have noticed that women in some countries carry their babies on the back. Science corroborates this quaint position, for there is a sizable decrease in energy expenditure compared to the conventional babe-in-arms

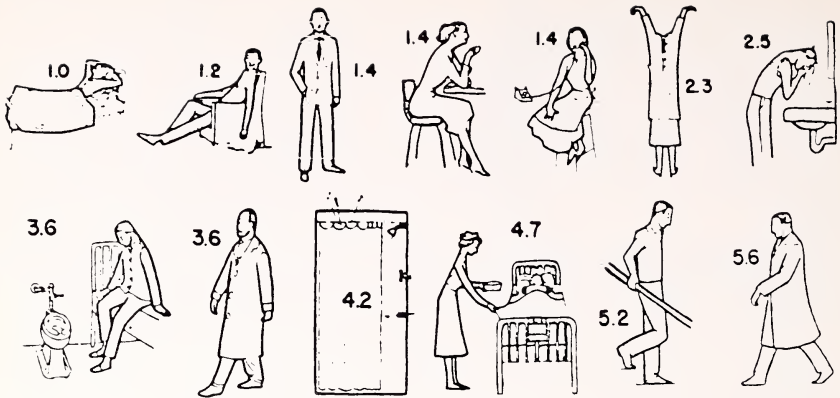
posture (8). Other studies have explored the optimal position for work: note the Cornell study on ironing which advocates a 34-inch height for the board instead of the conventional 31-inch (9). Apparently, many manufacturers and able-bodied homemakers have never heard of this investigation. I leave this (to you) familiar field with the idea that there must be many avenues of exploration that remain untapped leading to increased efficiency in useful work. Remember to accentuate the numerator and diminish the denominator.

Determination and application of energy costs of household tasks are what I wish to dwell upon here. There is a growing body of knowledge which scales various tasks by ascribing to them a figure in terms of calories per minute. This unit tells us something of the intensity of energy cost of a task and to a fair degree the work of the cardiac pump (10). You notice I use the word "intensity." This idea is important to the evaluation of work being done. For example, you can climb a flight of stairs in one minute or in five minutes; but in the first instance the intensity of work will be five times that of the lazy climb. As soon as we conceive something being performed per minute, per hour or per any time unit, we are talking of intensity or the rate of work. It is this rate which imposes more or less physiological load upon the organism. Determinations of energy costs under realistic conditions indicate that the average bread-maker works as hard or harder than many a bread-winner (8, 11). (See figure 4.)

The excellence of this body of knowledge is really far ahead of its application to assessing work tolerance of a particular patient, increasing her capacity for work, and particularly for the construction of an appropriate work prescription. Fine examples, however, are represented by Hellerstein in Cleveland (12), Levinson and Sparkman in Seattle (13), Morris and his group at Purdue University in relation to farmers (7), and the Los Angeles Heart Association which has recently put out a booklet for education of the physician in this aspect of ergonomics (14). I must mention, too, the excellent collection of papers, given at a workshop in July 1961, under the auspices of the Michigan Heart Association and with the inspiration of Ruth Kettunen, entitled "Rehabilitation of the Disabled Homemaker" (15). The aspects of application of ergonomics to the physically disabled are well presented by a number of speakers and a variety of household tasks with their caloric costs have been tabulated.

What can we draw from what has been and is being done in this field as a recommendation? Simply this. To supplement the conventional assessment of the physical (I leave social and psychological to my team-mates) capacity of the disabled homemaker, field studies

SELF CARE



HOUSEWORK



Figure 4. Energy costs of various activities, in calories per minute. A.M.A. Arch. Int. Med.—Gordon—April 1958 and Work Prescription for Heart Patients, Los Angeles County Heart Association

may be necessary—or shall I say household studies—to determine the energy cost of particular persons. When a person's ceiling of energy expenditure is known, a rational choice of this or that task can be made from comparative values of Calories per minute. Field studies may not be necessary in all cardiac—perhaps in only 20 per cent of the cases. It may be conceivable that one with paralysis may also require a better definition of tolerance and work prescription through energy cost studies, as exemplified by the two para-

plegic cases in figure 3. The applied science of ergonomics has given us much information through time and motion studies. The concept of using scales of effort-intensities to match individual tolerance needs more impetus.

There are several ways to stimulate the utilization of energy cost principles in formulation of work prescriptions. Engagement of appropriate therapists in hospitals and rehabilitation centers is the most obvious one. The occupational therapist is concerned with the problem of work tolerance and evaluation; she represents a resource ready at hand. I have had practical experience in evaluating work tolerance of cardiac patients during the early convalescing phase of illness just prior to discharge. Under supervision, the occupational therapist assigned to this program operated quite satisfactorily without untoward incident. To make the process of evaluation practical and uncomplicated, pulse rates were taken before, during, and two minutes after a timed activity of known energy-cost, in order to follow the patients' response. Symptoms of angina, palpitation, dyspnea, and fatigue were also utilized as an end-point signal that the ceiling of work tolerance had been reached. Physicians, once apprised of the availability of such testing, regularly referred their patients to us one to two weeks prior to discharge (16). In the process of the evaluation, upgrading of work tolerance is gained as an important by-product.

As a logical concomitant to this new tool of the occupational therapist, we have started teaching principles and practice of energy costs in the School of Occupational Therapy at the University of Illinois. As hours are devoted to rehabilitation in medical schools, this knowledge may diffuse into the medical profession. As for the physician, the technique properly concerns the specialists and they are showing increasing interest in it.

In a practical way, extension of home care programs to subserve rehabilitation is also essential to carry out these recommendations. A homemaker discharged home will need advice, adaptations, and aids directly referable to her home. Rehabilitation kitchens are fine for training. But when school is out, the patient is on her own in her own setting. Home care programs must evolve from ministrations solely to so-called ward cases to encompass all persons who need it. Chronic illness, disability, debility do not cease the moment a person sets foot in her house.

From another direction, namely dietetics, may be derived additional support for the homemaker beset with difficulties in management of her daily chores. I refer to the desirability of preventing obesity. The effects upon carbohydrate metabolism, cardiovascular function, and atherosclerosis are too well known even through the lay press to be further treated here. What may be less known

is the increasing work and cardiovascular stress imposed by a load of adiposity, though a moment's thought will indicate why. Walking for a fat man is not the same as for a thin man, ergonomically speaking (8). (See figure 5.) In addition, moderately severe to severe obesity increases the work of breathing, reduces respiratory capacity, and ultimately lowers endurance for activity by the impaired ventilation of the lungs. Obesity thus accentuates the denominator of our equation, but, more, may even unfavorably affect oxygen and carbon dioxide exchange (17). Disabled persons, particularly those in wheelchairs show a trend to rather sizable obesity. This is a problem that can not be overlooked. Unfortunately, in long-standing cases, overweight is chronic and fixed.

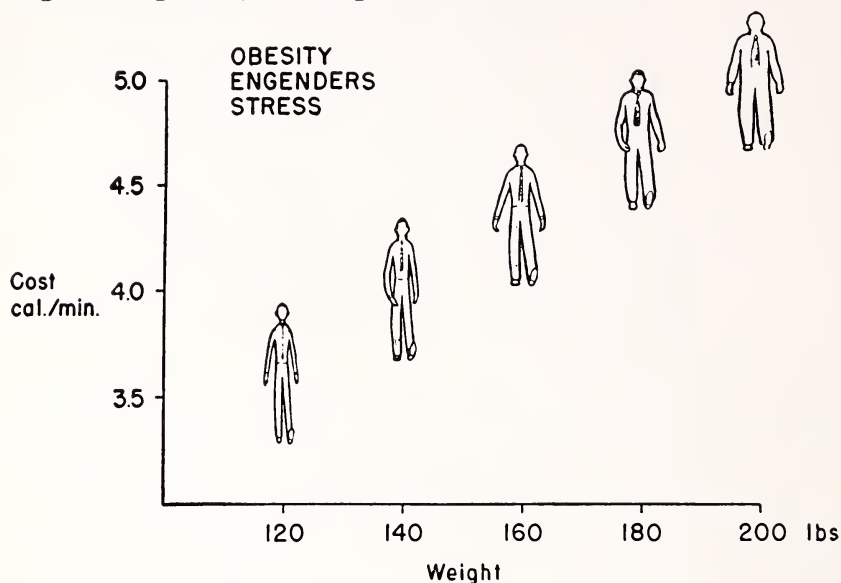


Figure 5. Differential calorie cost with increase of weight, walking at 2.5 mph. Reproduced with permission from *The Expenditure of Energy in Health and in Disease*. E. E. Gordon, M.D. *Medical Science* 3, No. 1 (Jan. 10, 1958), p. 19.

Self-Help Devices

The concept of efficiency can not cover all possibilities for improvement inherent in the patient. Some tasks will be impossible to perform or exceed his capacity. Here the field of self-help devices largely applies, by harnessing available power (locomotion by wheelchair) or through labor-saving equipment (electric wheelchair). Human engineering in all its aspects is the science pertinent to the invention and development of aids for improving the usefulness of the handicapped.

In this particular application to human misfortune, I must sound a note of impatience and quote myself from an article entitled,

“Development of Community Responsibility in Handicapped Youth.”

Technological means are now available for improving the physical capacity of the disabled by superior mechanized substitutes. But such substitutes are being used only on a minute scale for this purpose. The world has unfortunately focused its concern on survival of one or another social order. Such preoccupations militate against the development of truly creative methods in behalf of the disabled. The world struggle has taken over technology to its own purposes.

Hence there is a great disparity between technological means and their application to the needs of the disabled. This fact gives rise to a paradox. In the many countries where scientific knowledge has advanced beyond anything heretofore dreamed of, the term “handicapped” is still heard when the game of life is discussed. But the word should be obsolete, because hands in the original sense are no longer crucial. This is not to imply that hands are not needed today. But the idea of being at a disadvantage is no longer synonymous with being handless, because hands should be replaceable. Technology can see to that. By means of servo-mechanisms, brains can direct mechanical devices to do what flesh and blood hands can do. Given the knowledge and need, steel hands now carry out by remote control delicate procedures in radioactive chemistry. They can weigh and mix and pour. Why should they not perform a similar service for the disabled? But society has not seen fit to make this possibility an actuality. It is content with paying lip-service to it in the popular magazines which are designed not for teaching but for titillating the mind.

The paradox posed here is again encountered in the practical management of handicap. In an age when the airplane replaces the land vehicle for travel, when radio transmission replaces the printed word and the picture for communication, the disabled are provided not with true innovations, but with mere variations of instruments adapted from the able-bodied world. Human engineering could now transcend the limitations of an encumbered or useless hand; but self-help devices continue to be devised along lines borrowed from what is primarily suited for the normal-bodied person. The power of science could invent a marvelous leg, but only clumsy supports are as yet available. For, although the able-bodied benefit from the best available brains and material, only crumbs from the tables of science are devoted to the needs of the disabled. Because the applied sciences of metallurgy, plastics, electronics, bio physics, and biochemistry can fill these needs but fail to do so, handicap is today less than accident of nature than a condemnation by man. (18)

What can we recommend to close the enormous gap between applied science for the able and for the less-than-able? Medicine must share in the solution of the problem it has created by favoring survival at the price of handicap. It should sponsor research in human engineering and attempt to bring modern technological knowledge to bear on the problem of handicap. Self-help devices, born in rehabilitation centers, are really a weak response and do not employ the best engineering brains. The National Advisory Committee on Artificial Limbs created in 1946 represents the pattern of investigation and application I mean. Here medicine, engineering, psychology, and physiology are coordinated into a top-level community program. But so far application has been restricted to amputations, and this only because of the consequence of war. With

such a team, progress in physical rehabilitation is sure to be made, if we do not fear that vision may be interpreted as visionary.

REFERENCES

1. (a). Gordon, E. E., and Vanderwalde, H. Energy requirements in paraplegic ambulation. *Arch. Phys. Medicine* 37, 1956, p. 276-285.
(b). Gordon, E. E. Physiologic approach to ambulation in paraplegia. *J.A.M.A.* 161, 1956, p. 686-688.
(c). ——— Problems of Energy Cost in Rehabilitation. In *Proceedings Second International Congress of Physical Medicine*. Copenhagen: Dansks Fysiurgisk Selskab, 1957, p. 300.
2. Gilbreth, L. M. Quoted in *Manual for Training the Disabled Homemaker*. New York: The Institute of Physical Medicine and Rehabilitation, 1955.
3. Health Statistics, U.S. National Health Survey. Washington, D.C.: Public Health Service, U.S. Department of Health, Education, and Welfare, 1962.
4. Rodahl, K., and Horwath, S. M. *Muscle as a Tissue*. New York: McGraw-Hill Book Company, 1960.
5. Bard, G., MD, and Ralston, H. J. Measurement of energy expenditure during ambulation, with special reference to evaluation of assistive devices. *Arch. Phys. Medicine and Rehabilitation* 40, Oct. 1959, p. 415-420.
6. Muller, E. A., and Hettinger, T. Arbeitsphysiologische untersuchungen verschiedener oberschenkel-kunst-beine. *Ztschr. Orthop.* 81, 1952, p. 525.
7. *Proceedings Purdue Farm Cardiac Seminar*. Agricultural Experiment Station, Purdue University, Lafayette, Indiana, 1958.
8. Passmore, R., and Durnin, J. V. G. A. Human energy expenditure. *Physiol. Reviews* 35, Oct. 1955, p. 801-840.
9. Knowles, E. Some effects of the height of ironing surface on the worker. Cornell Univ. Agr. Expt. Sta. Bull. No. 833 (1946).
10. Kottke, F. J., Danz, J. N., and Kubicek, W. G. Study of cardiac output during rehabilitation activities. *Arch. Phys. Medicine* 38, 1957, p. 75; Kottke and co-workers: Five stage test of cardiac performance during occupational activity, *ibid.* 43 (1962), p. 228.
11. Gordon, E. E. Energy costs of activities in health and disease. *Arch. Internal Medicine* 101, 1958, p. 702.
12. (a). Hellerstein, H. K., and Ford, A. B. Rehabilitation of the cardiac patient. *J.A.M.A.* 164, 1957, p. 226.
(b). Ford, A. B., and Hellerstein, H. K. Energy cost of the master two-step test. *J.A.M.A.* 164, 1957, p. 1868.
13. Levinson, R. M., Sparkman, R. D., and Bruce, R. A. Comparison of Disability and Exercise Tolerance of Cardiac Patients Referred for Evaluation of Work Capacity. Presented at 39 Scientific Sessions, American Heart Association, Cincinnati, Ohio, Oct. 1956.

14. Work Prescription for Heart Patients. Los Angeles: Work Classification Unit, Los Angeles County Heart Association, 1962.
15. Kettunen, R. C., and Morris, C. K. *Proceedings of Workshop on Rehabilitation of the Disabled Homemaker*. Detroit, Michigan: Michigan Heart Association, 1961.
16. (a). Hendrickson, D., Anderson, J., and Gordon, E. E. A physiological approach to regulation of activity in the cardiac convalescent. *Am. J. of Occupational Therapy* 14, (Nov.-Dec. 1960).
(b). Gordon, E. E., and Anderson, M. Work prescription for cardiacs in the convalescent stage. *J.A.M.A.* 183, 1963, p. 137.
17. Fishman, A. P., Turino, G. M., Bergofsky, E. H. The syndrome of alveolar hypoventilation. *Am. J. of Medicine* 23, Sept. 1957, p. 333-339.
18. Gordon, E. E. Development of community responsibility in handicapped youth. *Medic. Times* 90, No. 1 (Jan. 1962), pp. 60-69.



A SPIKE ON A BOARD SIMPLIFIES POTATO PEELING

J. A. Manter, University of Connecticut, Photo

A REPORT ON RESEARCH AND DEMONSTRATION PROJECTS FROM THE FIELD OF HOME ECONOMICS RELATING TO REHABILITATION IN THE AREA OF HOMEMAKING WITH RECOMMENDATIONS FOR FURTHER STUDY

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Storrs

IN SELECTING RESEARCH and demonstration projects related to rehabilitation in the area of homemaking, I had a problem similar to that of the small boy who was forced to choose which one of a litter of kittens he would keep since the rest would have to be drowned! I am indebted to staff members in our school for many of the suggestions included; however, I must take the blame for any omission. The following guidelines were used in making the selection:

1. Since relatively little research has been *specifically* focused on the problems of the handicapped, we included some general research that could be elaborated and applied.
2. We made a special effort to include references on work done abroad especially in Finland, Sweden, France, Denmark, England, the Netherlands, and Canada. Nearly all of these countries have had to deal with war casualties in the general population as well as the disabilities due to accident and disease.
3. In order to determine the extent of interest in graduate schools of home economics, we checked the theses related to rehabilitation and found that in 19 graduate schools there had been 31 master's theses and 20 doctoral dissertations. These have been listed under subject-matter headings in the bibliography. Except where indicated, the theses are unpublished but are available through inter-library loan.
4. We explored the following areas of study ordinarily included in schools of home economics—clothing, textiles, and related art; foods and nutrition; housing, interior design, and furnishings; home management; child development and family relations; leadership training; motivation; research; and home safety.

Recommendations for further research are included under each area discussed. The references referred to in the text are indicated

by number, but other references are also listed in the bibliography. Addresses of sources follow the bibliographies.

Because of limitations in time, our search was limited for the most part to the 100 issues of the *Journal of Home Economics* published during the past 10 years. A more comprehensive study of home economics research appears in an article by Georgian Adams entitled "Fifty Years of Home Economics Research" (27). This gives a summary of the research done in the various areas of home economics under the auspices of the U.S. Department of Agriculture and in the nearly 500 degree-granting institutions in the United States. To go back still further, one could begin with the year 1875 and study the results of the work done by Wilbur Atwater, director of the first of the 51 Agricultural Experiment Stations to be established in the United States. His pioneering in the study of the composition of food and the chemical determination of its caloric value has had far-reaching significance in the study of human nutrition. (28)

CLOTHING, TEXTILES, AND RELATED ART

Research and Demonstration

Research in the area of clothing has been directed for the most part to the problems of men, women, and children with orthopedic handicaps and neurological diseases. They include clothing design, clothing selection and care, and the adaptation of commercial garments to suit the special needs of the handicapped. Publications include work done at various institutions: The Institute of Physical Medicine and Rehabilitation in New York City, (4) the Clothing and Housing Research Division of the USDA Agricultural Research Service, (6) the School of Home Economics at the University of Connecticut, (2, 7, 8) The National Institute for Consumer Information, Stockholm, Sweden, (5) The Regina Physical Restoration Center, Saskatchewan, Canada, (3) and the Vocational Guidance and Rehabilitation Center in Cleveland which now has a made-to-order service that supplies clothing to meet specific disabilities. (1)

Recommendations for Further Research

1. More research is needed in the selection and adaptation of commercially made garments to suit particular disabilities. This should include undergarments, outer garments for indoor wear and outdoor garments—including socks, shoes, overshoes, hats, and caps.
2. More textile research is needed in order to take advantage of the new lightweight insulated fabrics, wash-and-wear fabrics and

stretch fabrics from the point of view of comfort, appearance, care, and wearing qualities.

3. We need more research on clothing for teen-agers, with a special emphasis on becomingness and self-help features. To date, the chief efforts in research in clothing have been directed toward children and adults.
4. Research is needed in the adaptation of commercial patterns for men, women, and children to suit disabilities. (Note: The designing of special clothing for the handicapped has limited usefulness because of the difficulty in persuading pattern companies to take over the designs and in arranging for the manufacture of specially designed clothing for general distribution.)
5. Research is needed on the selection of clothing from the point of view of fabric performance and construction performance to meet the special strain and wear problems of persons with prostheses.
6. Research is urgently needed on protective pants to meet the problem of incontinence in men and women and children.
7. Research is also urgently needed on the psychological effects of clothing on the physically handicapped and the chronically ill, especially in the area of becomingness of color and design and the satisfaction expressed by the wearer.
8. Research is needed on special needs of persons using assistive devices. This might include such areas as pockets designed for persons using an upper extremity prosthesis and reinforcements in areas of special strain and wear for persons using long leg braces and for those using crutches.
9. Research is needed on the feasibility of using disposable clothing in situations where care is an important factor.
10. Research should be continued on the selection and adaptation of clothing with self-help features to encourage maximum independence in dressing among the physically handicapped and the chronically ill.

FOODS AND NUTRITION

Research and Demonstrations

Since the time of Dr. Atwater's research in 1875 on the chemical composition of food, (28) the area of foods and nutrition has been the focus for thousands of research projects. The number listed in this report will be limited for two reasons—the magnitude of the task and the fact that dietitians and nutritionists are included among the “health related professions” and should, therefore, be encouraged to study the problem of their role in rehabilitation and make their own recommendations.

A few references that seem particularly pertinent have been listed in the bibliography. Several of them deal with the problem of obesity—a concern for many of us and especially for those who have the added problem of physical limitations.

Recommendations for Further Research and Demonstrations

1. We need more research on the best time, place, and methods for teaching nutrition to the patient and to his family. (Some work has already been done on using the occasional preparation of food by the patient himself as a method of teaching nutrition.) (38)
2. There should be more research on the psychological, sociological, and economic factors involved in the selection and preparation of food. Too little has been done to insure the acceptance and a continuation of a diet by the patient and his family after hospitalization. For the handicapped person, deviations from the prescribed diet may have very serious results.
3. There has been a good deal of research done in the flight kitchens of the airlines on the consistency of food and the serving of food. This might be more generally applied to the food problems of the handicapped. (For example, the convenient buttonhole in the dinner napkin and the way the dishes are all stabilized on the tray. The consistency of the food and the shape of the dishes and utensils were the result of research rather than following conventional patterns. There was no ordinary fork but rather a cross between a fork and a spoon which facilitated the transporting of food from the tray to the mouth.)
4. The research behind the problem of supplying food for astronauts may give us some ideas for food for the handicapped. The idea of food in tubes may make it possible for patients with certain disabilities to feed themselves at least for a part of the time.
5. We need more research in work simplification in food preparation in order to help handicapped persons to be more independent and reduce the amount of care necessary.
6. The distribution of precooked food to the physically limited is another area for research. We have copied the idea of "Meals on Wheels" from England. We might also take an idea from Sweden and distribute frozen precooked food rather than hot food.

HOUSING, INTERIOR DESIGN, AND HOME FURNISHINGS

Research and Demonstrations

The kitchen was the starting point for the study of adaptations of interiors to suit the special needs of the handicapped. One of

the first studies, done in 1940, under the leadership of Lillian Gilbreth for the New York Heart Association, resulted in the "Heart of the Home" bulletin (43) which is still useful. This was followed by research done by a rehabilitation team at the Institute of Physical Medicine and Rehabilitation in New York with Julia Judson as the resource person in home management. This resulted in the excellent manual which should be a part of every rehabilitation library (51). Another publication of the Institute which has attracted international attention is the Horizon House Bulletin (66). This describes a house built on the lot adjoining the Institute in New York, which incorporates many desirable features for self-help and safety in furnishings, bathrooms, and various aspects of house-keeping.

The University of Illinois at Urbana is one of the great centers for research in housing. The Small Homes Council (68) and the School of Home Economics have done a great deal of research on all phases of housing that should be of value to those concerned with housing for the older age group as well as the handicapped. The storage publications (50) and those on the wheelchair kitchen, (48, 49) under the direction of Helen McCullough, are among the best available. Cornell University has also been a center for research in the area of storage and in kitchen planning, and through the years has produced a number of excellent bulletins. (45, 52, 53)

A great deal of work has been done on kitchen planning by the Clothing and Housing Research Division of the Agricultural Research Service, USDA. Several bulletins have been published on "energy saving kitchens." (47)

Another contribution by the Institute of Physical Medicine and Rehabilitation in New York is a survey of homemaking and housing for the disabled in the United States which was prepared especially for the International Conference in Stockholm in 1961. (64)

There are several other ideas from abroad. From England, there is a bulletin on "Flatlets for Older People" (60). From Sweden, there are the results from an excellent research project on the "Storage of Cleaning Materials" (64). From Scotland, there is a bulletin on "Housing of Special Groups" (67). From Denmark, there is a bulletin on "General Lines in Designs of Dwellings for Handicapped Persons Confined to Wheel Chairs." (57)

Some of the most significant adaptations in housing for the handicapped and the older age group have been made in England, the Netherlands, Finland, Denmark, Sweden, and France, and are described in some detail in the report of the Proceedings of the International Conference on the Physically Disabled and Their Environment held in Stockholm in October 1961 (64). This report also includes work done by the Swedish Central Committee for the Care of

Cripples in setting up their research kitchen, their training flat, and the demonstration bus that travels all over Sweden (54). A similar "rehabilitation bus" has been in operation in England for several years.

Significant work has been done in several European countries in adapting old houses to suit the special needs of the handicapped. Some of the new housing developments include both the handicapped and nonhandicapped in the same building. (The trend is away from segregating handicapped or older persons in housing developments.) In Utrecht, public housing often includes an "invalid room" for the person with a communicable disease (especially tuberculosis) arranged so that the patient may be isolated but still have the satisfaction of being close to the family.

Some of the most far-reaching research in housing has been carried on in the area of "architectural barriers." This program was sponsored by the National Society for Crippled Children and Adults and the President's Committee on Employment of the Physically Handicapped (63). The specifications for "making buildings and facilities accessible and usable by the physically handicapped" set up by the American Standards Association (55) have won recognition all over the world. These publications deal with "architectural barriers" in the home and in the community, particularly in public buildings.

Recommendations for Research and Demonstration

1. One of the chief problems in research in this area is the *lack of effective avenues of communication between those who do the research and those who put it into practice*. This problem might well be attacked on a demonstration basis. The permanent exhibit in the architectural center in Rotterdam is one effective method.
2. The *psychological problems* involved in making adaptations in housing and interior design to suit disability need more study. Many handicapped persons prefer to be uncomfortable rather than have their houses look different. Just as we disguise disability through adaptations of design in clothing, just so we should study ways of making housing adaptations as unobtrusive as possible.
3. Another obstacle in the area of adaptation of housing research to suit the special needs of the handicapped centers around the problems of adaptation of rented houses.
4. The resale problems of houses with extensive adaptations is another area for study.
5. The use of adapted areas of the home by other members of the

family is another area of concern. What may be comfortable for the handicapped person may not suit the nonhandicapped member of the family. This problem relates to home management and depends on who will do each task.

6. There has been relatively little research on the adaptation of the conventional bathroom to suit the special needs of the handicapped. (The housing references listed include specially designed bathrooms, but relatively few people can tear out and build anew.)
7. The most barren area of research under this topic is in the area of home furnishings. There has been some experimentation in raising chair heights (66) in choice of upholstery fabrics, in floor finishes, floor coverings, and lighting, but there is still plenty of room for research and demonstrations in this area, especially for those concerned with aesthetics and psychological values as well as "practical" use.
8. We have the specifications for removing architectural barriers in the home. The problem now is to demonstrate how they can be adapted to conventional houses, both rented and owned, and how they can be included in low-cost housing.

HOME MANAGEMENT

Research and Demonstrations

Since the homemaker with physical limitations cannot ordinarily be trained for a new job, she must go back to her old job and manage it, somehow, in spite of her limitations. She must choose from four alternatives—do the task herself, get someone else to do it for her, leave the task undone, or eliminate the need for the task. Successful rehabilitations in homemaking involve an appraisal of resources, both human and material, and a rethinking by the entire family of their goals and values. A new approach to the problem of managing the household is basic for the rehabilitation of the majority of homemakers with physical handicaps. Since management is a mental process, even a bedfast patient can make an important contribution.

We are indebted to two industrial engineers for pioneering in the application of the management process in the home. Nearly fifty years ago Frank and Lillian Gilbreth concentrated their efforts on developing a set of principles that, if applied to any specific job, would simplify work and thus save human energy and time. These principles were first applied to cardiac patients in the "Heart of the Home" kitchen (43). They are spelled out in more detail in Lillian Gilbreth's book on *Management in the Home*. (139)

Dr. Gilbreth has sparked a number of research and demonstration projects related to work simplification in the home. The "Take It Easy" film (159) and the bulletin on work simplification (145, 151) developed by Frances Sanderson and Hannah Pretzer at Wayne State University are *both* examples. Another Michigan project was the training program at the State University in which Ruth Ket-tunen produced some very useful teaching material (144). Dr. Gilbreth also served as a consultant in the development of the "Training Kitchen" at the Institute of Physical Medicine and Re-habilitation in New York City.

Dr. Gilbreth was also responsible for stimulating and guiding the research at the University of Connecticut on Work Simplification in Child Care for Physically Handicapped Mothers. This five-year research project involved the preparation of teaching materials to be used in programs for rehabilitation in homemaking by profes-sional personnel and by handicapped persons and their families (146). The project was partially financed by the Vocational Re-habilitation Administration and was its first challenge to a School of Home Economics to adapt its resources to the special needs of the handicapped. The teaching material produced in work simplification by this project includes motion pictures, slides, and a bulletin, some of which are listed under the various subject-matter heads. (146, 148, 161-166, 184, 186, 187)

Some good work in research in work simplification has developed at Pennsylvania State University and has resulted in a useful bul-letin on "Sewing and House Cleaning Hints" (12). Some excel-lent work in research and demonstration in home management for the handicapped has been done in Europe. Finland has a "pro-gressive care" plan in the Orthopedic Hospital in Helsinki that in-volves developing a maximum degree of independence in home-making in men, women, and children *before* they leave the hospi-tal. (142)

In the Netherlands, there has been a variety of experiments, espe-cially in adaptation of household equipment and in gadgets for homemakers with disabilities. These are on display at the Archi-tectural Center in Rotterdam and are included in the Proceedings of the International Conference on "The Physically Disabled and Their Environment," held in Stockholm in October 1961. (61, 64)

Several centers in England (133, 140) and Scotland have made strides in experimenting with homemaking skills as part of their program of occupational therapy. The first "rehabilitation bus" to be equipped to carry suggestions to all parts of Britain includes homemaking suggestions and is sponsored by the Central Commit-tee for the Care of Cripples.

Sweden has probably gone further in research in homemaker re-

habilitation (44, 54) than any other European country. The research kitchen at Bromma and the "training flat" in Stockholm have home economists on their staff. This research is reported in an excellent bulletin entitled, "Handicapped Homemaker" (155). This has been translated into English and is available through the International Society for the Rehabilitation of the Handicapped. Sweden also has a bus, devoted entirely to the rehabilitation of the homemaker, which tours the country. This is also sponsored by the Swedish Central Committee.

The National Swedish Institute for Consumer Information has included several research projects directed to the special needs of the handicapped. The storage unit which it designed is described in the Swedish Conference Report. (46)

Denmark has been in the lead in demonstrating how different types of prostheses may be utilized in homemaking activities. In the orthopedic hospital in Copenhagen, homemaking skills form an important part of the program of occupational therapy.

In France, the pioneering has included homemaking in programs of occupational therapy, especially at the Rehabilitation Centers in Garche and St. Cloud. Norway has also made great effort to help the handicapped become independent in homemaking. However, I am not aware of any homemaker publications in English from either Norway or France.

RESEARCH IN ENERGY EXPENDITURE

Without overlooking the significant work done by Dr. Edward Gordon in this field (86, 87, 88), I will limit my discussion to a few items in our bibliography and to some of the work I observed in Denmark. There is certainly great need for helping the patient translate the doctor's advice to "take it easy" into the task of managing her household.

Several schools of home economics have done outstanding research in this area of utilization of energy in household tasks. The bibliography includes publications from Cornell, (84, 85) Ohio State, (89) Michigan State, (104), and Washington State (93) Universities.

Energy studies have also been done in connection with the home economics section of the USDA Agricultural Research Service. (90, 91)

The studies in energy utilization point up again the necessity for the "team approach" in programs of homemaker rehabilitation. While it may be desirable for one patient to sit to work, it may be wise for another patient to stand for certain activities. Equipment "within easy reach" may be exactly right for some patients, but for others a good stretch may be desirable. If we cut down on energy

expenditure but do not at the same time help the patient to adjust her diet, we may have problems of obesity even more dangerous than problems of unnecessary expenditure of energy.

The problem of energy expenditure cannot be approached as an unrelated problem. There must be a study of the total problem of managing the home, a consideration of the family's goals and values, and an appraisal of its combined resources in energy, time, skills, and money. It is important, of course, to know how much energy is used in doing certain tasks with certain equipment by homemakers with certain types of disability. However, it is also important to know *which tasks are important in the homemaker's scale of values*. If caring for her own child gives the mother her greatest satisfactions and if she cannot accomplish this along with the rest of the household tasks, then the entire family must be involved in deciding what each will contribute and which jobs will be eliminated. If it gives the homemaker great satisfaction to iron her ruffled curtains, perhaps she should be encouraged to continue with this task and compromise on some other aspect of housekeeping.

A considerable amount of scientific research in energy utilization has also been done under the direction of Dr. Erling Asmussen of Denmark. His publications are listed in the bibliography. (94-101)

In order to be of any value, energy studies must be highly scientific and should not be attempted or applied without the cooperation of medical personnel.

FAMILY FINANCIAL PLANNING

Homes that include handicapped persons usually also have more than ordinary number of financial problems. Sweden has made progress in solving some of these problems through a plan for rehabilitation insurance (138). Such a plan is certainly worth exploring.

Because of the importance of family financial planning for all families, a great many studies have been made (148). Some of these have direct application to homes that include family members who are chronically ill or physically handicapped. We need more research in this area since the question of who will pay for the rehabilitation of the homemaker has not been answered on any consistent basis.

HOME MANAGEMENT

Recommendations for Research and Demonstration

1. Handicapped persons as "home managers"

Homemakers with serious physical limitations need the assurance of being able to manage their households as "planners" rather

than as "doers." Since management is a mental process, it should be possible to work out some reassuring demonstrations even with bedfast patients.

2. We need more research and demonstration projects on the selection of utensils and on the selection and adaptation of nursery and household equipment to suit the needs of the handicapped.
3. There should be more case studies of rehabilitation in homemaking with a step-by-step account of exactly how it was achieved. We are still far from having the answers to the questions of (a) "Who should rehabilitate the homemaker?" (b) "When should it begin?" (c) "Where should it be done?" (d) "How should it be done?" (e) "Who should do it?" (f) "Who should pay for it?"
4. Continue with more scientific studies of the utilization of energy in various household tasks.
5. Family financial planning studies are very much needed because of the special financial strain in homes where there is a family member who is physically handicapped or has a chronic illness.
6. There should be more studies on the employment of the handicapped in their own homes. Many of them have skills and talents that could be utilized and bring great satisfaction as well as additional income.
7. We need more research on the selection of household equipment for homemakers using upper extremity prostheses. This may be combined with research on the redesigning of prostheses for homemakers.

CHILD DEVELOPMENT AND FAMILY RELATIONS

Research and Demonstrations

A great deal of research has been done in both child development and family relations by home economists, psychologists, sociologists, social workers, physicians, and educators in various areas but relatively little has been applied to the particular problems of the handicapped. They are confronted with not only the ordinary problems faced by every family but also with the special complications caused by physical disabilities.

When disability strikes, there is, of course, the concern by the patient over "who will do my job," but there are also more fundamental and devastating concerns: "Can I continue to be a desirable marriage partner?" "Will I be wanted or rejected?" "How will my children feel about my disability?" "Will it also be a handicap in their development?"

"Many of the problems of family relations require the close co-operation of the specialist in home management, the psychologist, the sociologist, the marriage counselor, and the social worker. In his studies of role modification, Victor Christopherson has given us some insight into the problems of the husband who, because of his physical limitations, has been forced to assume the role of the homemaker while his wife assumes the role of wage-earner outside of the home (168). Since this aspect family relations is treated in Dr. Christopherson's paper, I will not include a detailed discussion. It is hoped, however, that we will focus the attention of skilled persons on the special problems of emotional acceptance or rejection of the spouse after a disability resulting in impairment of function or physical appearance.

In the area of child development, there have been many studies that relate to the problems of the handicapped child. A comprehensive compilation of research was published recently in the bulletin of the Merrill-Palmer School (175). There are also numerous references in the excellent "Research Relating to Children," compilations, published annually by the Children's Bureau. There have been many studies, too, in the area of social work. A good review of research in the area of parent influences on child personality is available through the Family Service Association. (170)

Some interesting psychological studies have been made by Murstein, under the auspices of the Hogg Foundation, on the Effect of Long-term Illness of Children on Their Own Personalities and On the Emotional Adjustment of Their Parents. (179, 180, 181)

An interesting study in Family Problems in Rehabilitation Counseling by Marra and Novis (176) includes areas of exploration that could lead to further study: The Effects of Disability on the Family Unit and Methods Used to Compensate for Loss of Earnings of Disabled Husband.

The problem of Work Simplification in Child Care by Physically Handicapped Women has been studied for the past nine years at the School of Home Economics at the University of Connecticut. This has been supported in part by the first grant ever given to a school of home economics by the U.S. Vocational Rehabilitation Administration. The grant gave significant recognition to homemaking as a vocational field and its importance in the field of rehabilitation. The Connecticut project was directed toward the preparation of teaching materials for the use of professional personnel concerned and by homemakers with physical disabilities and their families. Teaching materials include motion pictures, slides, bulletins, and exhibits (146). The areas of concern include, Adaptations of Nursery Equipment (183), Problems of Discipline (184), Self-Help

Clothing, (2-7) and various projects in work simplification and home management. (160, 166, and 186, 187)

Recommendations for Research and Demonstration

The factors involved in acceptance or rejection of the handicapped person by his family may lead into a number of different research problems involving both child development and family relations. These have been spelled out in some detail in the Marra-Novis reference (176) under the headings of:

Effects of Disability on the Husband—This could, of course, be directed toward any disabled member of the family.

Effects of Husband's Disability on Family Life—This suggestion points to a host of possibilities in family relations as they might concern husband and wife, or parent and child, or the effect on siblings when one child is handicapped.

Methods of Compensating for Loss of Earnings of Disabled Husband—This general heading suggests the possibility of research directed toward the problems involved in role modification (168). It may be desirable for the husband with disabilities to take over the housekeeping and have his wife seek employment outside of the home. We are in need of more demonstrations and case studies in order to learn what is involved in making such adjustments.

As the result of his research with the Hogg Foundation on the effect of long illness on the family, Murstein (181) suggests that further studies might be made on the effect of physical trauma to the parent, on the child or the spouse, and the effect of physical trauma to the child—on the parents and on the siblings.

The assurance that mothers with physical limitations can take care of their own children is one of the special contributions of the Connecticut project on Child Care Problems of Physically Handicapped Mothers (145). Research in this area should be continued and with more case studies. If these were publicized in pictorial form, they should be of great inspiration to mothers with physical disabilities and to their families.

LEADERSHIP TRAINING

Research and Demonstration

The most promising plan that involves leadership training is now in progress at the University of Vermont under the sponsorship of the Department of Home Economics (192). It was set up to determine means by which disabled women can be rehabilitated in their own homes for more effective homemaking by

1. Investigation of local resources.

2. Development by experimentation of a process and staffing pattern which is applicable to rural communities.
3. Determination of the type of professional background that is best suited to train disabled homemakers in their own own homes.
4. Determination of the effectiveness of using homes of rehabilitated homemakers as demonstration units.

Esther Knowles, associate professor in home management, is director of the project, and Julia Judson is the principal investigator. There is no printed material available as yet on this project.

There is need for more demonstration projects on the training of "rehabilitation counselors in homemaking" or "instructors in homemaker rehabilitation" (the title for this group has not been determined). The plan outlined in the writer's report to the University of California at Los Angeles Medical School (147) involves the in-service training for professional women who have retired in order to have families of their own. This proposal for the training suggests that it include women with professional backgrounds in such areas as home economics, occupational therapy, physical therapy, nursing, or social work. Some of these women may be interested in returning to part-time or full-time professional work after their children are launched. Their maturity and experience in homemaking along with their professional training and experience make them especially valuable as rehabilitation consultants or instructors in homemaking. The success of specialists in homemaker rehabilitation will depend to a large extent on the way in which their "in-service training" supplements their original professional training and their experience.

The proposal in the UCLA report is that an instructor or counselor in rehabilitation in homemaking be attached to rehabilitation centers in the area of their own homes and that they be available on either a part-time or full-time basis depending on the demand. The team at the rehabilitation center would then include "an instructor in homemaking" on call. The services of this person might then be purchased by the State Department of Vocational Rehabilitation just as they now purchase services of an occupational therapist or a physical therapist to work with selected clients.

The problem of leadership training is related, of course, to the question of who will rehabilitate the handicapped homemaker. After 10 years of research and study (including a six months' sabbatical study of 100 rehabilitation centers and homemaker rehabilitation programs in the United States and Europe), the writer is inclined to divide leadership training into two categories:

1. The training necessary for an occupational therapist who uses homemaking activities as part of the *therapy program*.

2. The training necessary for *vocational rehabilitation in homemaking*, some of which should be done in the patient's own home.

It is recommended that the persons responsible for vocational rehabilitation in homemaking will be "medically oriented"—have professional training in home management—have first-hand experience with child rearing and the management of a household—and have the maturity and the personality traits necessary for successful work with handicapped homemakers and their families.

Some of the recommendations in this area of leadership training are listed in the following pages, along with a list of workshops that have extended over more than a day.

Recommendations for Further Research and Demonstration

1. *Develop Regional Centers for Research Demonstration and Leadership Training*

There is need for pilot studies in the development of regional demonstration centers for *research, demonstration, and leadership training* in homemaker rehabilitation. These centers should include exhibits of *inexpensive* adaptations of household and nursery equipment, work simplification suggestions for various household tasks, gadgets suited to various disabilities, self-help clothing, furniture adaptations, bathroom adaptations, safety devices, etc. They should also offer personal and "mail-order" consultant service to handicapped persons and their families and opportunities for training part-time and full-time professional personnel.

2. *Orient Members of Health Related Professions*

It should be possible to prepare (and test) "capsule type" information including films, slides, and bulletins that could be included in preprofessional or in-service training of the health related professions.

Many of the professional persons who deal with patients in hospitals and rehabilitation centers might use this material to increase their appreciation of what actually happens to patients when they go home and try to take over the responsibilities of homemaking. A first-hand contact with successful rehabilitation in homemaking and a knowledge of resources might be helpful to them in reassuring patients and their families.

3. *Use the Vermont demonstration (192)* in leadership training as a basis and develop a plan for training instructors in homemaker rehabilitation in various parts of the country so that they will be available to do the "home work" in connection with pilot projects.
4. *Encourage States to hold workshops* (at least three days in length) on the "Team Approach to Homemaker Rehabilitation."

This should help to develop a greater awareness of the problems involved in homemaker rehabilitation and the possible contributions of various professional groups.

5. *Encourage* graduate schools of home economics, occupational therapy and nursing to have their students select *thesis topics from some aspects of rehabilitation* in homemaking. (The lists included in the bibliographies in this report could be sent as suggestions along with the recommendations for further research that are listed.)
6. *Arrange a "pilot study" on the desirability of providing "teaching kits"* of publications and slides in homemaker rehabilitation to professional schools and libraries and to county medical libraries. (The problem now is that this material is too scattered and too difficult to obtain when needed.)
7. *Try out a "pilot project" in providing films* on "rehabilitation in homemaking" to State film libraries. (The limited number of films available now in a few centers cannot possibly take care of the potential demand.)
8. *Develop a "Resource Book on Homemaker Rehabilitation"* This could be a "hard cover" book and also a loose-leaf construction that could be distributed in sections by some national organizations such as the American Home Economics Association, Easter Seal Society or some national professional organization in nursing or occupational therapy that is equipped to carry on a mail-order sales program. The advantage of having it "loose leaf" is that it could be supplemented as new material is developed. It could also be sold in sections and used with patients and their families according to their particular needs.
9. *Try out a pilot study for providing both a teaching grant and training grant* to a school of home economics, nursing or occupational therapy for providing graduate training in the field of homeaker rehabilitation.
10. *Cooperate with schools of occupational therapy* in preparing teaching material that would promote the more general use of homemaking activities as part of the therapy program.
11. *Set up a pilot study of the possibility of having State Vocational Rehabilitation Agencies "buy the services" of "instructors in homemaker rehabilitation"* from a Rehabilitation Center much as they now "buy" the services of occupational therapists and physical therapists. (See introduction to this section for job description of "instructor in homemaker rehabilitation.")
12. *Explore the possibility of making instructors in homemaker re-*

habilitation available to public health nurses in some area where such a "team" job can be worked out. (The public health nurse is the professional person who is more likely than any other to see the handicapped person in his own home. She already has the affiliation with the "medical team" and could be the "contact person" for all or any specialists who might be invited to give some form of specialized service in the home.)

MOTIVATION

Research and Demonstration

There is an increasing awareness in various foreign countries and in the United States of the possibilities in using homemaking activities as a means of *stimulating interest and effort* in the patient. If the patient were able to project himself into the future and to see possibilities for functioning as a useful member of the family group, it could have a significant effect on his recovery.

An effort in this direction has been made by the University of Connecticut in the production of a film (196) and a bulletin, both entitled "Where There Is a Will" (195). The development of a set of slides in this area is now in progress. In testing this material with handicapped persons and their families, the response has almost always been: "Well, if she can do it, I can too." Or again, "I guess I'll go back to doing my exercises if it will mean that I can do things like that!"

In the suggestions for the homemaking area of the proposed rehabilitation center at UCLA (147), the writer outlined the possibility of using homemaking activities in departments of occupational therapy as an "experimental approach in having the patient solve his own problems." There is no doubt that success breeds success. If the patient can begin with a small task in which he has a special interest and if he can succeed in this task, it should give him a sense of achievement that will not only build his morale, but encourage him to go on with more difficult undertakings.

One of the most interesting experiments in "motivation research" is just being completed by Virginia Wheeler at the Institute of Physical Medicine and Rehabilitation in New York. The project is entitled, *The Development of a Planning Service to Promptly Adapt the Home Kitchens of Handicapped Homemakers to Their Individual Requirements* (195). The significant thing in this title is the emphasis on "promptly adapt." Mrs. Wheeler has been responsible for raising the morale of many patients and their families by helping them to plan kitchens and make the alterations necessary before the patient is discharged. The patient can then begin to function as soon as she returns home instead of sinking into despair

because of inability to do her old job with her new physical limitations.

Recommendations for Research and Demonstration

1. Try out experiments on *when* and *where* rehabilitation in homemaking should begin; *how* it should be done in its various stages; and *who* should do it?

a. Experiments concerning *when* and *where* to begin:

Members of the health-related professions would probably agree that the *attitude of the patient and her family toward her recovery* have an important bearing on successful rehabilitation in homemaking. The approach would vary, of course, with each patient, but there might be real value in kindling the "*element of hope*" in the patient and her family *even before she goes to the hospital!* The problem of trying to revive hope that has been dead for months or even years presents many psychological difficulties that may possibly be avoided or at least be diminished.

b. Experiments in *how* to rehabilitate the handicapped homemaker:

There should be more research in the "*experimental approach*" to rehabilitation in homemaking. There is a strong tendency to *give the patient the answers* and show her how to do a multitude of small jobs. If she could be encouraged to begin with the task in which she has the greatest interest and help *find her own method* for getting things done, she would gain the self-confidence necessary to proceed to more difficult tasks. She would then be better prepared to start on the long road to vocational rehabilitation in homemaking and take pride and satisfaction in her achievements.

c. Experiments in layout of homemaking areas in rehabilitation centers to facilitate using homemaking activities as part of a therapy program:

In the section on leadership training the writer proposed two approaches to homemaker rehabilitation:

1. The expansion of the use of homemaking activities as part of the program of occupational therapy in the hospital or rehabilitation center.

2. The vocational rehabilitation of the homemaker in her own home.

If homemaking activities are to be used more generally in programs of occupational therapy, it would be well to restudy the arrangement of equipment. Too often the homemaking activities are limited to a kitchen, and this is often so far removed from the occupational therapy center that it is difficult to supervise. Detailed proposals are outlined in the Recommendations (made by the writer)

for a Homemaking Area in the Proposed Rehabilitation Center at UCLA. (147)

SAFETY IN THE HOME

Research and Demonstrations

Two national organizations (198, 199) have concerned themselves with the special problems of safety in the home faced by handicapped persons. Homes have hazards for all of us, but for the physically handicapped, these are even greater dangers.

There is also an excellent bulletin published by the Small Homes Council entitled "Hazard-Free Houses For All" (200). It points out the danger zones and makes excellent recommendations.

Recommendations for Further Research

There is no doubt but that we have the results of far more research than we apply. New research should go into the problems of putting research into practice. This will involve a cooperative effort of psychologists, educators, architects, builders, furniture designers, and interior designers.

Bibliography on Research and Demonstrations Relating to Rehabilitation in Homemaking

CLOTHING AND TEXTILES

A. CLOTHING DESIGN

1. Behrens, Dorothy (Mrs.) *Clothing and Equipment Aids—Price List*. Vocational Guidance and Rehabilitation Service, Cleveland, Ohio.
2. Boettke, E. M. *Suggestions for Physically Handicapped Mothers on Clothing for Preschool Children*. Illustrated bulletin. Storrs, Conn.: School of Home Economics, Univ. of Conn., 1957.
3. Bryce, T. E. Self-help clothes for handicapped children. *Canadian J. of Occupational Therapy* 26, No. 3 (Sept. 1959), pp. 83-87. Author is Rehabilitation Home Economist at the Regina Physical Restoration Center, Saskatchewan.
4. Cookman, H., and Zimmerman, M. E., OTR. *Functional Fashions for the Physically Handicapped*. Illustrated bulletin. New York: Institute of Physical Medicine and Rehabilitation, New York University Medical Center, 1961.
5. National Institute for Consumer Information, Stockholm, Sweden. Research on clothing for the aged, the ill, and for children. Reported in *Proceedings of the International Conference on the Physically Disabled and Their Environment*, Stockholm, Sweden, Oct. 1961. Sponsored by the International Society for the Rehabilitation of the Disabled.

6. Scott, C. L. *Clothes for the Physically Handicapped Homemaker*. Illustrated bulletin. Home Economics Research Report No. 12. Agr. Research Serv., USDA, 1961. Exhibit available.

B. CLOTHING SELECTION AND ADAPTATION

7. Bare, C., Boettke, E., Waggoner, N. *Self-Help Clothing for Handicapped Children*. Illustrated bulletin. Chicago: National Society for Crippled Children and Adults, 1962.
8. Boettke, E. M. *Self-Help Clothing for Pre-School Children*. Series of six illustrated posters (supply exhausted). Storrs, Conn.: School of Home Economics, University of Conn.

C. PSYCHOLOGICAL EFFECT OF CLOTHING

9. Bader, I. M., and Hoffman, A. M. *The Social Science Aspects of Clothing with Implications for Older Women*. Bibliography. Institute of Gerontology and Dept. of Home Economics, State University of Iowa, 1962.
10. Ryan, M. S. *Psychological Effects of Clothing*. Cornell Univ. Agr. Expt. Sta. Bull. 882, 1952; 898, 1953; 900, 1953; 905, 1954. (Out of print).
11. Sybers, R., and Roach, M. E. Clothing and human behavior. *J. Home Econ.* 54, No. 3 (March 1962), pp. 184-187.

D. CLOTHING CONSTRUCTION

12. Bevacqua, K. M., Gerhold, M. Q., and Ruef, R. H. *Sewing and House Cleaning Units for Cardiac Homemakers*. Illustrated bulletin. Home Econ. Research Pub. 175, University Park: College of Home Economics, Penn. State Univ., 1960.
13. Slaughter, M. Home sewing centers. *J. Home Econ.* 45, No. 5 (May 1953), pp. 323-325.

E. TEXTILES

14. Jebe, E., Beveridge, E., Hawkes, G. R., Potgieter, F., Roberson, O. How to study consumer satisfaction with children's clothing made of different textile fibers. *J. Home Econ.* 50, No. 3 (March 1958), pp. 213-218.
15. Labarthe, J. Current developments and a look ahead in textiles and clothing. *J. Home Econ.* 51, No. 7 (Sept. 1959), pp. 587-590.
16. McFadden, F. E. Insulated lining fabrics. *J. Home Econ.* 54, No. 5 (May 1962), pp. 384-386.
17. *Consumer Satisfaction with Women's Blouses*; Part II, Laboratory Wear Studies. Northeast Regional Bulletin 35. Agr. Expt. Sta., Univ. of Rhode Island, 1958.
18. Swanson, C. *Consumer Practices of Older Persons in Selection, Use, and Care of Clothing*. Contributing project for Northeast Regional Proj. NE-19 (revised), 1958-59. (To be published)
19. Mitchell, T. F., Wilbur, J. F., and Young, E. *A Study of the Performance of Selected Wash and Wear Suits for Men*. Col-

lege Park, Maryland: Textiles and Clothing Department, College of Home Economics, Univ. of Maryland, Research Publ. No. 20, 1961.

20. Weidenbamer, M. *Mothers' Opinions of Fibers in Children's Clothes—Ages 1-3*. Supplement to Marketing Research Report 429. Washington, D.C.: Agr. Marketing Serv., U.S. Dept. of Agriculture, Sept. 1960.

MASTER'S THESES

21. Boettke, E., and Zookk, M. O. (Penn. State Univ.) Reported in: Dress designs with self-help features for the preschool child. *J. Home Econ.* 48, No. 8 (Oct. 1956), pp. 643-646.
22. Gerhold, M. Q. Activities of 31 Cardiac Homemakers with Emphasis on Sewing. Penn. State Univ., 1959.
23. Taylor, L. P. Dresses for Physically Handicapped Girls Age Five-Twelve Inclusive, Using Braces, Crutches, and Wheelchair. West Virginia Univ., 1962.
24. Tharp, B. J. A Study of Design and Fitting Problems in Clothing for Asymmetric Figures. New York State Coll. of Home Econ. at Cornell Univ., 1956.

DISSERTATIONS

25. Rosencranz, M. L. The Application of a Projective Technique for Analyzing Clothing Awareness, Clothing Symbols, and the Range of Themes Associated with Clothing Behavior. Mich. State Univ., 1960.
26. Treece, A. J. An Interpretation of Clothing Behavior Based on Social Psychological Theory. Ohio State Univ., 1959.

FOODS AND NUTRITION

27. Adams, G. Fifty years of home economics research. *J. Home Econ.* 51, No. 1 (Jan. 1959), pp. 12-18.
28. Atwater, W. O. *The Chemical Composition of American Food Materials*. USDA Bulletin No. 28. Washington, D.C.: U.S. Dept. of Agriculture, 1896. (Out of print).
29. Brown, H. B., MD. Can heart attacks be controlled by diet? Steps along the way. *J. Home Econ.* 54, No. 3 (March 1962), pp. 179-183.
30. Eppright, E. S., Coon, I., Jebe, E. *Very Heavy and Obese School Children in Iowa*. Part of North Central Region Co-operative Project N.C.—5, Nutritional Status and Dietary Needs of Population Groups. Journal paper No. 2789—Project 1021 and 113. Human Nutrition Research Branch, Iowa Agr. Expt. Sta. Reprints from *J. Home Econ.* 48, No. 3 (March 1956), pp. 168-172.
31. Karle, I. P., Bleiler, R. E., and Ohlson, M. A. Nutritional status of cerebral-palsied children. *J. Am. Dietetic Assoc.* 38, No. 1 (Jan. 1961), pp. 22-26.

32. Leverton, R. M., Ellison, J. M., Childs, M. T., Carver, A. F., and Twardock, D. Source of calories in the recorded self-chosen diets of women. *J. Home Econ.* 51, No. 1 (Jan. 1959), pp. 33-38.
33. Norman, K. D., Taira, M. M., and Forbes, C. E. Nutrition for handicapped homemakers. *J. Am. Dietetic Assoc.* 32, No. 11 (Nov. 1956), pp. 1054-1057.
34. Ohlson, M. A., Jackson, L., Boek, J., Cederquist, D. C., Brewer, W. D., and Brown, E. G. Nutrition and dietary habits of aging women. *Am. J. Public Health* 40, No. 9 (Sept. 1950), pp. 1101-1108.
35. Personius, C. J. The current situation and trends pertinent to the future development of food and nutrition. *J. Home Econ.* 51, No. 7 (Sept. 1959), pp. 577-580, 586.
36. Ruby, D. O., and Matheny, W. D. Comments on growth of cerebral palsied children. *J. Am. Dietetic Assoc.* 40, No. 6 (June 1962), pp. 525-527.
37. Swanson, P. Physiological Changes and Adjustments from the Standpoint of a Nutritionist. In *Potentialities of Women in the Middle Years*. Gross, I. H., Editor. East Lansing, Mich.: Mich. State Univ. Press, 1956.
38. White, J. S. Patients cook their way back to health. *Modern Hospital* 97, Aug. 1961, pp. 112, 114, 117.
39. Wilkins, S. N., Ruby, D. O., Kelly, H. G., and Jackson, R. L. Nutritional management of children with diabetes mellitus. *Diabetes* 4, No. 1 (Jan.-Feb. 1955), pp. 24-31.
40. Young, C. M., Brown, A. M., Gehring, B. A., and Morris, B. M. Stepwise weight reduction in obese young women: clinical and metabolic responses. *J. Nutrition* 70, No. 3 (March 1960), pp. 391-400.

MASTER'S THESIS

41. Maretzki, A. N., (Penn State Univ.), and Dodds, M. L. Reported in: Attempted weight loss on self-regulated diets. *J. Home Econ.* 54, No. 6 (June 1962), pp. 475-478.

DISSERTATION

42. Munves, E. D., (New York Univ.). Abstract: A comparison of the effectiveness of two methods of influencing certain obese college students to attain and to maintain "ideal" weight. *J. Home Econ.* 46, No. 3 (March 1954), p. 199.

HOUSING, INTERIOR DESIGN, AND HOME FURNISHINGS

A. KITCHEN DESIGN AND HOUSEHOLD STORAGE

43. American Heart Association. *Heart-of-the-Home—Picture Edition*. New York: The Association. (Also available from local Heart Associations).
44. Berg, I. M., and Müller, H. *Kitchen for Disabled Homemakers*. No. 1. Stockholm, Sweden: Institute for Consumer Education, 1951.

45. Heiner, M. K., and Steidl, R. E. *Guides for Arrangement of Urban Family Kitchens*. Ithaca, N.Y.: Cornell Univ. Agr. Expt. Sta. Bulletin 878, 1951. (Out of print)
46. Holme, B. Storage Closet for Cleaning Equipment. National Swedish Institute for Consumer Information. Included in the report of the International Society for the Rehabilitation of the Disabled: Conference on *The Physically Disabled and Their Environment*, Stockholm, 1961.
47. Howard, M. S., Thye, L. S., and Tayloe, G. K. *The Beltsville Kitchen-Workroom with Energy-Saving Features*. Home and Garden Bulletin No. 60. U.S. Dept. of Agriculture. Washington, D.C.: Government Printing Office, 1958.
48. McCullough, H. E. and Farnham, M. B. *Space and Design Requirements for Wheelchair Kitchens*. Urbana, Ill.: Univ. of Ill., Agr. Expt. Sta. Bull. 661, June 1960.
49. ———. *Kitchens for Women in Wheelchairs*. Urbana, Ill.: Univ. of Ill., Agr. Exten. Serv. Circular 841, 1961.
50. McCullough, Helen E. *Space Design for Household Storage*. Urbana, Ill.: Univ. of Ill., Agr. Expt. Sta. Bull. 557, Aug. 1952.
51. Rusk, H. A., MD, Kristeller, E., MD, Judson, J. S., Hunt, G. M., RN, and Zimmerman, M., OTR. *A Manual for Training the Disabled Homemaker*. Rehabilitation Monograph VIII. New York: The Institute of Physical Medicine and Rehabilitation, 1955.
52. Steidl, R. E. *Work Before and After Addition of Functional Storage Devices in Home Kitchens*. Ithaca, N.Y.: Cornell Univ., Agr. Expt. Sta. Bull. 969, October 1961.
53. ———. *Supplementary Sinks in Home Kitchens*. Ithaca, N.Y.: Cornell Univ., Agr. Expt. Sta. Memoir 374, Oct. 1960.
54. Swedish Central Committee for the Care of Cripples, Bromma, Sweden, in cooperation with the National Institute for Consumer Information, Stockholm, *Research Kitchen Also Training Flat for Handicapped Homemakers*. (Mimeographed material).

B. ARCHITECTURAL DESIGN

55. American Standards Association. *Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped*. A set of Standard Specifications. New York: The Association, 1961.
56. Cushman, E. M. *Home Activity Centers*. Ithaca, N.Y.: New York State College of Home Econ., Cornell University. Cornell Misc. Bull. 34, September 1959.
57. Leschly, V., and Kjaer, A. and B. *General Lines in Design of Dwellings for Handicapped Confined to Wheelchairs*. Hellerup, Denmark: The Danish National Association for Infantile Paralysis, 1960.
58. McCullough, Helen E. A pilot study of space requirements for household activities. *J. Home Econ.* 47, No. 1 (Jan. 1955), pp. 37-41.

59. McCullough, H. E., Philson, K., Smith, R. H., Wood, A. L., Woolrich, A. *Space Standards for Household Activities*. Urbana, Ill.: Univ. of Ill., Agr. Expt. Sta. Bull. 686, May 1962.
60. Ministry of Housing and Local Government. *Flatlets for Old People*. London: Her Majesty's Stationery Office, 1958.
61. Netherlands Central Society for the Care of Disabled. *Housing for the Disabled*, translated from the Dutch. New York: International Society for the Rehabilitation of the Disabled, 1960.
62. Paralyzed Veterans of America. *Wheel Chair Houses*. Second Edition. Swissvale, Penn.: The Veterans, 1961.
63. President's Committee on Employment of the Physically Handicapped. *Architectural Barriers and the Handicapped*. Washington, D.C.: The Committee, 1962.
64. Proceedings of the International Conference on *The Physically Disabled and Their Environment*, Stockholm, 1961, International Society for Rehabilitation of the Disabled. Includes descriptions of housing adaptations in Sweden, Finland, France, Netherlands, Denmark, England; also of demonstration bus for planning kitchens and bathrooms; reports from England and Sweden.
65. Public Housing Administration. *Housing for the Elderly: Architects' Check List*. Washington, D.C.: Public Housing Administration, 1962.
66. Rusk, H. A., MD, and Others. *A Functional Home for Easier Living; Designed for the Physically Disabled, the Cardiac, and the Elderly*. New York: The Institute of Physical Medicine and Rehabilitation, 1959.
67. Scottish Housing Advisory Committee. *The Housing of Special Groups*. Edinburgh, Scotland: Her Majesty's Stationery Office, 1952.
68. Small Homes Council, Univ. of Illinois, Urbana, Ill. Research on all phases of home construction.
69. Smith, R. H., Gerhold, M. Q., and Kivlin, L. D. *Family Activity Patterns Basic to Farm House Planning*. University Park, Penn.: Penn. Agr. Expt. Sta. Bull. 678, March 1961. College of Home Econ. Research Publ. 177.

MASTER'S THESES

70. Davis, C. J. Adjustments in Open Floor Space and Storage Space Divisions Expressed by Homemakers Who Live in Speculative-Built Houses. The Woman's College of the Univ. of North Carolina, 1962.
71. Duffy, C. J. The Assimilation of Kitchen Planning Principles from Research Findings with Application to a Suggested Functional Design of a Two-Person Kitchen. Univ. of Nevada, 1962.
72. Elmer, C. D. A Study to Determine the Specifications of Wheel-chair Ramps. University of Iowa, 1957.
73. Greer, L. E. Efficiency in the Arrangement of Equipment and Materials for the Performance of Common Household Tasks in

Food Preparation. N.Y. State Coll. of Home Econ. at Cornell Univ., 1938.

74. Johnson, M. An Investigation of the Opinions of Florida Homemakers, with Certain Physical Handicaps, Concerning Their Living Quarters. Florida State Univ., 1952.
75. Jonas, C. E. Kitchen Storage Spaces in Relation to Management. N.Y. State Coll. of Home Econ. at Cornell Univ., 1938.
76. Lester, A. H. An Exploratory Study of Management in Relations to Remodeling of Twenty Kitchens in Stephens, Arkansas. Cornell Univ., 1961.
77. Pogue, M. J. A Study of Housing Preferences, Activities and Opinions Regarding the Use of Stairways by 50 Cardiac and 50 non-Cardiac Homemakers, Franklin County, Ohio. Ohio State Univ., 1958.
78. Womack, W. L. Evaluation of Identical Household Kitchen Work Areas. Purdue University, 1961.

DISSERTATIONS

79. Gassett, L. J. (Purdue Univ., 1955) Abstract: Some bases for recommendations for storage space allowances in the meal preparation and meal service area of southern rural homes. *J. Home Econ.* 50, No. 3 (March 1958), p. 226.
80. Mize, J. J. Methods for Studying the Home Management Aspects of Kitchen Storage Space for Farm Homes. Cornell Univ., 1952.
81. Pickett, M. S. (Iowa State Univ.) Reported in: Evaluating storage and counter space. *J. Home Econ.* 52, No. 1 (Jan. 1960), pp. 35-37.

HOME MANAGEMENT

A. FAMILY FINANCIAL PLANNING

82. Eppstein, L. A. *Money Income Distribution of the Aged*. Research and Statistics Note No. 14. Washington, D.C.: Div. of Program Research, Social Security Admin., Dept. of Health, Education, and Welfare. 1959.
83. Folksam Insurance Co. (Stockholm, Sweden). *Insurance for Handicapped Housewives*. Summary of Folksam's Rehabilitation Insurance, 1950.

B. ENERGY EXPENDITURE

84. Bratton, E. C. *Oxygen Consumed in Household Tasks*. Ithaca, N.Y.: Cornell Univ. Agr. Expt. Sta., Bull. 873, 1951. (Out of print)
85. ———. *Some Factors of Cost to the Body in Standing to Work and Sitting to Work under Different Postural Conditions*. Ithaca, N.Y.: Cornell Univ. Expt. Sta., Memoir 365, June 1959.
86. Gordon, E. E., and Anderson, M. Work prescription for cardiacs in the convalescent stage. *J. Am. Med. Assoc.* 183, 1962, pp. 137-139.

87. Gordon, E. E., MD. Energy costs of activities in health and disease. *Am. Med. Assoc. Archives of Internal Medicine* 101, April 1958, pp. 702-713.
88. Hendrickson, D., OTR, Anderson, J., OTR, and Gordon, E. E., MD. A physiological approach to the regulation of activity in the cardiac convalescent. *Am. J. of Occupational Therapy* 14, No. 6 (Dec. 1960), pp. 292-296.
89. Keiser, M. B., and Weaver, E. K. Body movements related to energy used. *J. Home Econ.* 54, No. 6 (June 1962), pp. 479-482.
90. McCracken, E. C, and Richardson, M. Human energy expenditures as criteria for the design of household-storage facilities. *J. Home Econ.* 51, No. 3 (March 1959), pp. 198-206.
91. ———. *Energy Expenditures of Women Performing Selected Activities*. Home Economics Research Report No. 11. Washington, D.C.: U.S. Dept. of Agriculture, Agr. Research Serv., Dec. 1960.
92. Passmore, R., and Durnin, J. V. G. A. Human energy expenditure. *Physiological Reviews* 35, No. 4 (Oct. 1955), pp. 801-840.
93. Swartz, V. W. Human Energy Cost of Certain Household Tasks. Pullman, Wash.: State Coll. of Wash. Agr. Expt. Sta., Bull. 282, 1933. (Out of print)
- 94-101. From Testing and Observation Institute of the Danish National Association for Infantile Paralysis, Hellerup, Denmark:
 94. Asmussen, E., Klausen, K., and Poulsen, E. *The Determination of the Energy Requirements of Practical Work from Pulse Rate and Ergometer Test*. No. 7, 1960.
 95. Asmussen, E., Brandt, M., Molbech, S., and Mortensen, K. *A New Test for Estimating Fitness for Housework*. No. 10, 1961.
 96. Caspersen, F., and Larsen, S-E., and Nielsen, I. *A Remote Pulse Recording System*. No. 8, 1960.
 97. Caspersen, F., Heeboll-Nielsen, K., and Molbech, S. *Methods for Evaluation of Muscle Strength*. No. 5, 1959.
 98. Caspersen, F., and Heeboll-Nielsen, K. *Isometric Muscle Strength of Adult Men and Women*. No. 11, 1961.
 99. Helweg-Larsen, B., Nyegaard, G., Asmussen, E., and Molbech, S. *Estimating the Relative Working Capacity of Housewives Doing Housework*, No. 1, 1958.
 100. Helweg-Larsen, B., and Molbech, S. *Methods and Standards for Evaluation of the Physiological Working Capacity of Patients*. No. 4, 1959.
 101. Petersen, F. B. *The Effect of Training with Varying Work Intensities on Muscle Strength and on Circulatory Adaptation to Work*. No. 12, 1962.
102. Ralston, H. J., Gregory, M. D., and Chapman, C. E., MD. Energy expenditure of patients with motor impairments. *Rehabilitation Record* 2, No. 3 (May-June 1961), pp. 9-12.

103. Knowles (Weaver), E. *Some Effects of the Height of Ironing Surface on the Worker*. Ithaca, N.Y.: Cornell Univ. Agr. Expt. Sta., Bull. 833, May 1946. (Out of print)
104. Wiegand, E., and Gross, I. H. *Fatigue of Homemakers with Young Children*. East Lansing, Mich.: Mich. State Univ., Agr. Expt. Sta., Bull. 265, Dept. of Home Management.

MASTER'S THESES

105. Bevacqua, K. M. *Homemaking and Other Activities of 31 Cardiac Women in Central Pennsylvania with Emphasis on Housecleaning*. Penn. State Univ., 1959.
106. Etzel-Mattsson, M. *Some Factors to Consider When Deciding the Height of the Dishwashing Area in the Home Kitchen*. Univ. of Conn., 1963.
107. Gaudin, J. L. *Organization and Evaluation of Household Work for the Task of Washing Clothes*. Cornell Univ., 1960.
108. Geotz, H. M. *Household Tasks Found Difficult by Older Homemakers*. Univ. of Arizona, 1962.
109. Honts, Marion Tate. *Application of Work Simplification to Specific Allowed Activities of the Cardiac Homemaker*. Wayne State Univ., 1951.
110. Hutson, J. *Annotated bibliography: Work Simplification in Regard to the Disabled Homemaker with Special Interest in the Cardiac Homemaker*. Southern Illinois Univ., 1962 (An undergraduate honors project in the Department of Home and Family, School of Home Economics)
111. Judson, J. S. *Home Management Aids for Women with Physical Limitation*. Ohio State Univ., 1949.
112. Ketchum, F. N. *A Study of Homemaker's Values as Reflected in Time Used for Family and Personal Activities*. Mich. State Univ., 1961.
113. Kettunen, R. C. *A Limited Survey of Research Studies and Pertinent Material Bearing Upon the Problems of the Cardiac Homemaker*. Mich. State Univ., 1952.
114. King, B. G. *The Use of Time and Work Simplification Practice Followed by Fifty-Seven Young Tennessee Homemakers*. Univ. of Tenn., 1959.
115. Kopp, C., OTR. (Univ. of S. Calif.) Abstract: Ortheses for disabled homemakers—factors affecting their use. *Am. J. Occupational Therapy* 16, No. 4 (July-Aug. 1962), pp. 190-194.
116. Mathiott, M. K. *Recent Developments in Rehabilitation for the Physically Handicapped Homemaker*. Ohio State Univ., 1954.
117. Merritt, R. E. *Development of a Program of Home Economics Education for Convalescence Based on Findings from Classes of Tubercular Patients at the Onondaga Sanitorium, Syracuse, New York*. Syracuse Univ., 1953.
118. Neef, G. S. *A Study of the Daily Activities of Ten Homemakers Confined to Wheelchairs with the Factors Involved in*

- Their Abilities to Adjust to the Physical Handicaps. Cornell Univ. 1954.
119. Nelson, V. I. Home Management Practices of Some Orthopedically Handicapped Homemakers in the Lincoln, Nebraska, Area. Univ. of Nebraska, 1957.
120. Partain, L. L. Homemakers' Appraisal of Special Features on Four Major Household Appliances. Penn. State University, 1961.
121. Tallman, L. B. Planning Related to Meal Preparation. Cornell Univ., 1961.
122. Walker, M. The Acceptability of Certain Low-Cost Foods to Low- and Middle-Income Families. Penn. State Univ., 1961.

DISSERTATIONS

123. Cowles, May L. (Univ. of Wisconsin), Dietz, R. P. (Univ. of Wisconsin). Reported in: Time spent in homemaking activities by a selected group of Wisconsin farm homemakers. *J. Home Econ.* 48, No. 1 (Jan. 1956), pp. 29-35.
124. Crow, J. H. Financial Management in Relation to Family Values and Concepts of Financial Security. Cornell Univ., 1961.
125. Gage, M. G. The Work Load and Its Value for 50 Homemakers, Tompkins County, New York. Cornell Univ., 1960.
126. Maloch, F. Characteristics of Most and Least Liked Household Tasks. Cornell Univ., 1962.
127. Schomaker, P. K. Financial Decision-making as Reported by 100 Farm Families in Michigan. Mich. State Univ., 1961.
128. Warren, J. *Use of Time in Relation to Home Management*. Ithaca, N.Y.: Cornell Univ. Agr. Expt. Sta. Bull. 734, 1940. (Out of print)
129. Singer, M. E. Energy Expenditure and Its Relationship to Working Heights, Space and Methods of Work in the Performance of a Household Task. Ohio State Univ., 1960.

C. HOME MANAGEMENT—MISCELLANEOUS

130. Aho, S. *Bibliography, Work Simplification in Food Preparation*. Storrs, Conn.: Univ. of Conn., Jan. 1961.
131. Asp, E., Noble, I., Clark, F. Pilot study of money and time spent in preparing baked products from individual and premixed ingredients. *J. Home Econ.* 49, No. 9 (Nov. 1957), pp. 717-719.
132. Bymers, G., and Murray, J. Food marketing practices of older households. *J. Home Econ.* 52, No. 3 (March 1960), pp. 171-176.
133. Cooksey, F. S. Rehabilitation of the disabled housewife. (King's College Hospital, London, England). *Occupational Therapy* 17, No. 4 (Nov. 1954), pp. 133-144.
134. Cowles, M. L., Steele, S. M., Kishler, M. B. Savings in distance walked in kitchens through reorganization of storage and work space. *J. Home Econ.* 50, No. 3 (March 1958), pp. 169-174.
135. Davis, M. J. Decision-making in relation to performance of household activities in New York state homes. (Abstract of doc-

- toral thesis, Cornell Univ.). *J. Home Econ.* 50, No. 3 (March 1958), p. 226.
136. Deacon, R. E. *Family Laundering at Home and with Commercial Services*. Wooster, Ohio: Ohio Agr. Expt. Sta. Research Bull. 869, Nov. 1960.
 137. Ehrenkranz, F. Effect of built-in versus free-standing cooking appliances on wall space and cabinet frontage in corridor and L kitchens. *J. Home Econ.* 53, No. 5 (May 1961), pp. 364-370.
 138. Folksam Insurance Co., Stockholm, Sweden, in cooperation with Household Group, Swedish Central Committee for the Care of Cripples, Bromma, Sweden. *Don't Give Up, Mother*. (An Abridged English version of the illustrated bulletin *Integetappat Mamma*.)
 139. Gilbreth, L. M., Thomas, O. M., and Clymer, E. *Management in the Home*. New York: Dodd Mead & Company, 1959.
 140. Harris, R., MD. Rehabilitation in hemiplegia. *The Medical Press* (London) 240, No. 6224, 1954. (Note: Dr. Harris is consultant in physical medicine and rehabilitation for the Devonshire Royal Hospital, Buxton, England, and for the Manchester Royal Infirmary.)
 141. Harris, R. and Millard, J. B. Rehabilitation of the disabled housewife; report of a year's work. *Annals Physical Med.* 2, No. 6 (April 1955), pp. 201-206.
 142. Invalididisaatio (Invalid Hospital), *Apuneuvoja-invalidiperheenemännille* (Suggestions for disabled homemaker). Tenholantie, 10, Helsinki, Finland, 1961.
 143. Johnston, B. J. Home laundering, a study of equipment and procedures. *J. Home Econ.* 50, No. 1 (Jan. 1958), pp. 36-39.
 144. Kettunen, R. C. *Take It Easy*. Series of pamphlets on home management, No. F-213, F-214, F-217, and F-257. East Lansing, Mich.: Mich. State Univ., Coop. Exten. Serv.
 145. LaFrance, E. Tested Methods for Simplified Housework. New York (22): Birk & Co., Inc., 22 E. 60th St. (Results of research done at Wayne University, 1955; out of print.)
 146. May, E. E., Waggoner, N. R. *Work Simplification in Child Care*. (Teaching materials for the rehabilitation of the physically handicapped homemaker. Storrs, Conn.: Univ. of Conn., Oct. 1962.)
 147. May, E. E. Recommendations for the Homemaking Area of Proposed U.C.L.A. Rehabilitation Center. (Mimeo. Loan copies available from the author, School of Home Economics, University of Conn., Storrs.)
 148. Minden, M. B. *A Bibliography on Home Management With Emphasis on Work Simplification*. Storrs, Conn.: Univ. of Conn., 1960.
 149. Nichols, A., Russell, T. S., and Wood, A. L. Space requirements for use and care of laundry appliances. *J. Home Econ.* 53, No. 3 (March 1961), pp. 185-189.

150. Rollins, M. A. Research Needs in Family Economics. In *Proceedings of the Family Economics—Home Management Conference on Areas of Research*. Sponsored by the FE-HM Section of the American Home Economics Association at Ohio State University, June 1952. (Out of print)
151. Sanderson, F., and Pretzer, H. *Six Easy Does It* leaflets. Detroit, Mich.: Wayne State Univ.
152. Sinden, C. P., and Johnston, K. A. *Space for Home Laundering*. University Park: Penn. Agr. Expt. Sta. Bull. 658, July 1959. College of Home Economics Research Publ. 162.
153. Snow, P. R., and Armbruster, G. Management aspects of convenience foods. *J. Home Econ.*, 53, No. 5 (May 1961), pp. 442-446.
154. Steidl, R. E. Use of time during family meal preparation and cleanup. *J. Home Econ.* 50, No. 6 (June 1958), pp. 447-450.
155. Swedish Central Committee for the Welfare of Cripples, Stockholm, Sweden. *The Physically Handicapped Homemaker*. (Pamphlet translated into English by the International Society for the Rehabilitation of the Disabled.)
156. Tayloe, G. *Some Considerations in Buying Portable Cooking Appliances*. Talk at 40th Annual Agricultural Outlook Conference, Washington, D.C., 1962. See also: Churchill, F., and Thye, L. S., Performance characteristics of portable electric cooking appliances. *J. Home Econ.* 55, No. 4 (April 1963), pp. 261-267.
157. Walker, K. E. *Homemaking Work Units for New York State Households*. Ithaca, N.Y.: Cornell Univ. Agr. Expt. Sta. Memoir 353, Dec. 1957.
158. Weaver, E. K., Bailey, K. B., and Everhart, V. V. *Wall Finishes for Kitchens, Utility and Bathrooms*. Wooster, Ohio: Ohio Agr. Expt. Sta. Research Bull. 823, Dec. 1958.

D. WORK SIMPLIFICATION

159. Film: *Take It Easy*, Prepared by Wayne State University for the Michigan Heart Association. For rent or sale from American Heart Association.
- 160-163. Films Distributed by the Audio-Visual Center, University of Conn., Storrs:
 160. *An Approach to Work Simplification for Handicapped Homemakers*.
 161. *Principles of Motion Economy Illustrated by Handicapped Homemakers*.
 162. *Work Simplification Demonstrated by a One-Handed Mother in Bathing Baby*.
 163. *Work Simplification Demonstrated by a Wheelchair Mother Preparing Formula*.
- 164-166. Slides on Work Simplification. University of Conn., Storrs. (For sale only):
 164. *You Can Do Family Laundry with Hand Limitations*. (25, \$9)
 165. *Principles of Work Simplification Illustrated by Baby Bathing with Hand Limitations*. (15, \$6)
 166. *A Wheelchair Mother Prepares Baby's Formula*. (19, \$7)

CHILD DEVELOPMENT AND FAMILY RELATIONS

167. Albrecht, R. Intergeneration parent patterns. *J. Home Econ.* 32, No. 1 (Jan. 1954), pp. 29-32.
168. Christopherson, V. A. Role modifications of the handicapped homemaker. *Rehabilitation Literature* 21, No. 4 (April 1960), pp. 110-117.
169. Deutsch, C. P. and Goldston, J. A. Family factors in the home adjustment of the severely disabled. *Marriage and Family Living* 22, No. 4 (Nov. 1960), pp. 312-316.
170. Frankel, R. V. *A Review of Research on Parent Influences on Child Personality*. The Family Service Association of America, 215 Fourth Ave., New York, N.Y., 1959.
171. Gardner, D. B., Hawkes, G. R., and Pease, D. Development and use of research methods in child development. *J. Home Econ.* 50, No. 3 (March 1958), pp. 201-206.
172. Guensberg, M., MD. Emotional implications of handicaps. *Crippled Child* 27, No. 5 (Feb. 1950), pp. 20-21, 26-28.
173. Hawkes, G. R., Burchinal, L. G., Gardner, B., and Porter, B. M. *Parents' Acceptance of Their Children*. Journal Paper No. J-2852, Iowa Agr. Expt. Sta., Ames, Iowa. Project 1171, Home Economics Research. Reprinted from *J. Home Econ.* 48, No. 3 (March 1956), pp. 195-200.
174. Hubert, M. A. G., and Britton, J. H. *Attitudes and Practices of Mothers Rearing Their Children from Birth to the Age of Two Years*. Research Publ. No. 144, Coll. of Home Econ., Penn. State Univ. See also *J. Home Econ.* 49, No. 3 (March 1957), pp. 208-219.
175. Jordan, T. E. Research on the handicapped child and the family. *Merrill-Palmer Quart.* 8, No. 4 (Oct. 1962). (Includes extensive bibliography.)
176. Marra, J. L. and Davis, F. W. Family problems in rehabilitation counseling. *Personnel and Guidance J.* 38, Sept. 1959, pp. 48-52.
177. Menninger, W. C., MD. Emotional adjustments for the handicapped. *Crippled Child* 27, No. 4 (Dec. 1949), pp. 4-7, 26-28.
178. Morgan, M. I. The contributions and needs of home economics research in the area of family relations. *J. Home Econ.* 51, No. 5 (May 1959), pp. 358-361.
179. Murstein, B. I. Personality and intellectual changes in leukemia: a case study. *J. of Projective Techniques* 22, No. 4 (Dec. 1958), pp. 421-426.
180. ———. The effect of long-term illness of children on the emotional adjustment of parents. *Child Devel.* 31, No. 1 (March 1960), pp. 157-171.
181. ———. Attitudes of parents of hospitalized children toward doctors, nurses, and husbands: the construction of three scales. *J. of Clin. Psychol.* 14, No. 2 (April 1958), pp. 184-186.
182. Rusk, H. A., MD, and Novey, J. Impact of chronic illness on

- family. *Marriage and Family Living* 19, No. 2 (May 1957), pp. 193-197.
183. Waggoner, N. R., and Reedy, G. W. *Child Care Equipment for Physically Handicapped Mothers*. Storrs, Conn.: School of Home Economics, Univ. of Conn., 1961.
184. Wall, J. S. *Play Experiences Handicapped Mothers May Share with Young Children*. Storrs, Conn.: School of Home Economics, Univ. of Conn., 1961.
185. Wendland, L. V. A therapeutic group with husbands and wives of poliomyelitic patients. *Group Psychotherapy* 8, No. 1 (April 1955), pp. 25-32.

MOTION PICTURES

- 186-187. Available from the Audio-Visual Center, Univ. of Conn., Storrs.
186. *Child Care Problems of Physically Handicapped Homemakers*. Problems faced by six orthopedically handicapped women in caring for preschool children.
187. *The Best Things in Life*. How five mothers with physical handicaps share play activities with their children.

DISSERTATIONS

188. Blum, A. (Cornell Univ.) Abstract: Parent and child rigidity patterns and their relationship to child-rearing practices. *J. Home Econ.* 46, No. 3 (March 1954), p. 202.
189. Borgman, B. D. (Cornell Univ.) Abstract: Relation of degree and consistency of parental control to children's behavior in six selected categories. *J. Home Econ.* 46, No. 3 (March 1954), p. 202.
190. Highberger, R. (State Univ. of Iowa) Abstract: The relationship between maternal behavior and the child's early adjustment to nursery school. *J. Home Econ.* 46, No. 3 (March 1954), p. 204.
191. Moore, F. (N.Y. Univ.) Children's concepts of family relationships as revealed by their responses to certain excerpted motion pictures. *J. Home Econ.* 46, No. 3 (March 1954), p. 204.

LEADERSHIP TRAINING

192. Knowles, E., and Judson, J. Research and Demonstration Project No. 547, *Rehabilitation of Rural Homemakers in Their Own Homes*. Dept. of Home Econ., Univ. of Vermont. (In progress)
193. *Workshops on Homemaker Rehabilitation:*
- 1953 Leaders Workshop on Principles of Work Simplification Applied to Problems of Physically Handicapped Homemakers, July 14-20, 1953, University of Connecticut. Sponsored by School of Home Economics, Univ. of Conn., in cooperation with School of Business Administration, Univ. of Conn. School of Physical Therapy, Univ. of Conn. School of Physical Education, Univ. of Conn. School of Nursing, Univ. of Conn.

Division of University Extension, Univ. of Conn.
Connecticut Heart Association
Connecticut Society for Crippled Children & Adults
Bureau of Vocational Rehabilitation, Conn. State Dept. of Educ.
U.S. Dept. of Health, Education, and Welfare, Office of Vocational Rehabilitation

- 1954 Work Simplification-Home Management Workshop for graduate credit (three weeks). This included leaders concerned with both normal and handicapped homemakers.
School of Home Economics, Univ. of Conn.
Division of University Extension, Univ. of Conn.
- 1955 The Team Approach to the Rehabilitation of the Handicapped Homemaker, May 31-June 3, 1955. University of Connecticut.
Sponsored by
School of Home Economics, Univ. of Conn., in cooperation with the U.S. Vocational Rehabilitation Administration and representatives from the following professional fields: medicine, nursing, physical therapy, occupational therapy, social work, psychology, industrial management, home economics extension, and the following subject-matter areas in home economics: foods and nutrition, clothing and textiles, home management, and child development and family relations.
- 1957 Techniques in Homemaking for the Disabled, June 24-28, 1957, Colorado State University
Occupational Therapy Division, College of Home Economics, Colorado State Univ., Fort Collins, Colorado, and Office of Vocational Rehabilitation, Dept. of Health, Education, and Welfare.
- 1959 Conference on Work Simplification for the Disabled Homemaker, July 12-15, Southern Illinois University, Carbondale, Ill.
School of Home Economics, Southern Illinois Univ.
- 1959 Conference on Rehabilitation and Work Simplification, June 8-12, University of Arizona, Tucson, Arizona
School of Home Economics, Univ. of Arizona
Arizona State Dept. of Health
Arizona Vocational Rehabilitation Division
Southwest Chapter Arthritis and Rheumatism Foundation
- 1960 Expanding the Services of the Home Economist in Rehabilitation, June 25-27, Denver, Colorado
Joint Committee on Rehabilitation of the American Home Economics Association and American Dietetic Association
Colorado State University College of Home Economics, Div. of Occupational Therapy
Denver Regional Office, Vocational Rehabilitation Administration
- 1961 Rehabilitation of the Disabled Homemaker, July 2-8, 1961, Michigan State University, East Lansing, Michigan
Michigan Heart Association
American Heart Association
College of Home Economics, Michigan State Univ.
Rehabilitation Institute, Detroit

1961 Workshop in Home Management and Family Housing, July 10-22, 1961, Virginia Polytechnic Institute, Blacksburg, Va. School of Home Economics, Va. Polytechnic Inst. (One day devoted to home management problems of the handicapped)

1961 ISRD CONFERENCE—The Physically Disabled and Their Environment, Stockholm, Sweden, Oct. 12-18.

Sponsored by the

International Society for the Rehabilitation of the Disabled

1961 Workshop for Secondary School Teachers on Homemaking Instruction for the Handicapped Youth in Public Schools, N.Y. Univ. College of Education, Plattsburgh, N.Y.

Dept. of Home Economics, N.Y. Univ. College of Educ., Plattsburgh, N.Y.

MOTIVATION RESEARCH

194. Speare, E. *Where There's a Will*. Pamphlet. Storrs, Conn.: Univ. of Conn., 1959.

195. Wheeler, V. *Development of a Planning Service to Promptly Adapt the Home Kitchen of Handicapped Homemakers to Their Individual Requirements*. Progress Report. New York: The Institute of Physical Medicine and Rehabilitation, Aug. 1961.

196. *Where There's a Will*. Motion picture. Storrs, Conn.: Audio-Visual Center, Univ. of Conn.

RESEARCH ON SAFETY IN THE HOME

197. Waldschmidt, P., and Sanderson, F. G. *Home Wiring for the Physically Limited*. National Electric Products, Pittsburgh, Penn.

198. National Safety Council, Home Safety Dept. Several booklets on *Safety in the Home*. List of publications available.

199. National Society for Crippled Children and Adults. *Safety Check List for the Aging and the Handicapped*. *Safety Check List for Parents—Is Your Child Safe?* List of publications available.

200. Small Homes Council. *Hazard-Free Houses For All*. Urbana, Ill.: The Council, Univ. of Ill. Circular Cl. 1, 1958.

201. The Royal Bank of Canada. *Safety Is a Personal Thing*. July 1960.

SECTION VI

WHERE DO WE GO FROM HERE IN PROFESSIONAL TRAINING? SUMMARY OF GENERAL RECOMMENDATIONS FROM WORK GROUPS

MARJORIE BALL, OTR, Director,
Department of Occupational Therapy, College of Home Economics
Colorado State University

K NOWING THAT MINE was to be the responsibility of summing up your recommendations, I tried to come somewhat prepared. I discussed the topic with home economists in the various areas at Colorado State University. I looked up all the articles I could find in the journals of the professions represented.

But when confronted with the variety and number of recommendations poured forth by this group, I was so overwhelmed that all I could think of was the motto I once cross-stitched on a handwoven linen sampler (a required project in my era as a student occupational therapist). The motto ran: "The world is so full of a number of things, I'm sure we should all be as happy as kings."

Well, as I begin my task, the number of things did not make me a happy king! I was distinctly unhappy, confused, and almost panicked by the heap of recommendations. How to tackle them?

The job needed management. Management is synonymous with Lillian Gilbreth. Why not start with her time-tested series of questions to clarify this problem?

FIRST: What is to be done?

Well, that was easy for me. It was already stated in the purpose of the Workshop.

We were to identify needs; and

We were to develop recommendations for a comprehensive nationwide program for training key personnel concerned with the rehabilitation of the physically handicapped in homemaking activities.

But one of the first group recommendations directly pertained to

this second statement, in fact, suggested modifying it to read, "program for training key personnel *to concern themselves* with the rehabilitation, etc."—an interesting shift in emphasis implying that we cannot assume that key personnel are already concerned with our Workshop focus of interest, but that key personnel should be trained to concern themselves with activities of homemaking for the physically disabled.

Another modification suggested was to broaden the scope of the term "physically handicapped" to include a wide age range, the illiterate, and other special groups.

SECOND: Who Is to Do It?

We seemed to agree that helping the disabled homemaker make adjustments requires the skills of many disciplines—not just one or two. The rehabilitation team is recognized as the "Who." However, one group noted that the psychologist should always be considered a team member.

Several groups suggested recruitment by regions and communities of inactive professional workers (those rearing families or those whose families are grown) for specialized training to prepare them to rehabilitate the disabled in homemaking activities. One group suggested [through joint professional and community action] establishing a register of persons from the several professions with skills and knowledge in homemaking activities who could serve as consultants. Another group suggested exploring use of part-time home economists.

THIRD: What is there to get? What to give?

We seem, as expressed by our group recommendations, to feel that an important body of knowledge exists and has been displayed here but that it is incompletely disseminated and utilized.

Many recommendations were concerned with this.

Perhaps most frequent was the request for an annotated, carefully selected bibliography of references on homemaking rehabilitation. It was felt that it should be brief to encourage use, but representative of best current practices.

An addition to the bibliography idea came in several suggestions to compile a list of fiction and autobiography pertinent to rehabilitation problems (including positive and negative family relations).

Next, many groups recommended interchange of ideas, information, case histories showing the team approach in rehabilitating the handicapped homemaker through the medium of the national journals of the various professional groups involved.

Strong pleas were made for funds to make possible distribution of available printed and published material. It was felt there was a need to analyze, coordinate, and disseminate existing knowledge.

One group suggested that inexpensive single sheets (with illustrations) handed out to patients and their families would be valuable.

Some groups hoped for a regional basis for distribution of resource material, and one earnestly recommended seeking a way to pool resource materials; to organize a clearinghouse for them.

Films were noted by several groups as valuable both for teaching and motivating patients, their families, and personnel. A most interesting suggestion came to make a motion picture of a nonhandicapped man performing homemaking activities to use with and help motivate the disabled man. Others saw a need to duplicate available photos and distribute them.

FOURTH: Where Is It to be Done?

Ideas ranged from the local to the national level. We did seem to stay within the continental limits of the United States, but we were broadly inclusive.

We suggested community workshops—usually of an interdisciplinary nature; regional meetings similar to this workshop; State and national meetings.

We proposed inclusion of material in professional courses; we mentioned in-service training; we thought of refresher courses for persons who had been inactive professionally.

Then we really became specific and set down our thoughts on:

FIFTH: How Is It to be Done?

It is interesting to note how action-minded this group is. The greatest number of recommendations concerned "How."

In Institutions of Professional Training

1. Provide teaching grants in schools of home economics to develop graduate programs and in-service training in rehabilitation in homemaking.
2. Establish training courses in three or four colleges of home economics where home economics, physical therapy, occupational therapists, nurses, social welfare personnel, and vocational counselors can secure help in working with the homemaker who is disabled.
3. Encourage home economics faculties to work with medical schools in integration of information into appropriate areas of their training, and provide opportunities for medical orientation for home economists concerned with rehabilitation.
4. Provide traineeships for graduate students interested in preparing for homemaker rehabilitation.
5. Seek means of educating professional faculties in centers giving professional training on all aspects of homemaker rehabilitation.

American Home Economics Association seek funds to explore regional needs by means "of regional interdisciplinary meetings similar to this present one on rehabilitation of the physically handicapped in homemaking activities.

A series of institutes should be offered to multidisciplinary groups for orientation to rehabilitation of the handicapped in homemaking activities.

Establish centers to conduct workshops to train interested professional persons in rehabilitation of homemakers, similar to those established under sponsorship of Vocational Rehabilitation Administration for Prosthetics, Orthotics, and Functional Bracing. This would involve expert educational guidance as well as use of experts in various professional fields.

In Community-centered Professional Training

Home economists, including dietitians and nutritionists, should work with physicians through Community Medical Societies.

1. In-service programs where teaching homemaking activities is well done should be encouraged to set up training programs for allied professional personnel so that each professional group can get advanced skill.
2. Centers which do homemaker rehabilitation well should be encouraged to run workshops for allied personnel.
3. A mobile unit for teaching homemaking activities to personnel and to patients should be considered.
4. Television should be used as a medium for teaching meal preparation, homemaking, marketing, work simplification to disabled people in the home (those for whom ambulation to a community center for group teaching would be a problem).

Materials especially for service clubs and women's clubs are needed to inform the organizations' members of rehabilitation of the handicapped in homemaking activities and of the resources of the community.

Urge States to use Education, Improvement, and Demonstration grants from Vocational Rehabilitation Administration to develop projects to employ counselors (or other professionals) to work only with the handicapped homemaker case load.

In Teaching Materials and Research

The needs recognized included:

Continued research as background for preparation of teaching material.

Funds for continuing research in the area.

Dissemination of information on maternal and child care and problems of handicapped mothers.

Better continuity in motivational approaches by all disciplines to achieve more effective relationship and result.

Need to develop a common vocabulary.

Basic courses in professional education to include information which will develop better understanding and acceptance of person with disabilities.

Development of programmed learning techniques by different groups and sharing with other agencies.

Research on followup of rehabilitated handicapped homemakers to evaluate retention and effectiveness of training.

Research on motivation of handicapped homemakers.

THIS LEAVES US WITH MRS. GILBRETH'S LAST QUESTION: WHEN?

And I must add that we haven't really finished the answer to the preceding question: How? We have just made a brave and vigorous start. But we have succeeded in suggesting some provocative possibilities for the future of this subject in which we have all shown such lively interest.

Recommendations from Work Groups

Specific recommendations not included in the preceding general recommendations:

Rehabilitation workers should recognize that other people live in the home and use the same facilities as the handicapped homemaker.

The need for family counseling, with more emphasis placed on interpersonal relations in family, should be recognized.

Financial counseling may be needed by families with a handicapped member needing rehabilitation in homemaking activities.

A comprehensive nationwide program should train key personnel to concern themselves with the rehabilitation of the physically handicapped in homemaking activities.

Personnel might be increased by recruiting retired professional workers and providing preparation in basic homemaking skills to enable them to serve as teachers of homemakers in homes.

Joint professional and community action might establish a register of persons from the several professions with skills and knowledge in homemaking activities who could serve on call as consultants to any professional person who is providing home services to homemakers with handicaps.

A short annotated bibliography of references on homemaker rehabilitation that contains the most useful materials from each of the professional fields is needed.

Following this conference, explore with the professional staff

representatives of each profession represented in this conference opportunities for disseminating information regarding the physically handicapped homemakers. (Example: through professional journals or publications.)

THE VOCATIONAL REHABILITATION ADMINISTRATION RESPONDS TO THE WORKSHOP

CECILE HILLYER

Chief, Division of Training

Vocational Rehabilitation Administration

Washington

YOU WERE ASKED to come to this workshop to exchange ideas and information that would help the Vocational Rehabilitation Administration to decide what it should attempt in future years to prepare professional personnel more adequately to serve the considerable numbers of disabled persons to assume their responsibilities for homemaking activities.

VRA is accustomed to seeking and getting advice about the direction its training program should take. In the second year of our training grant program—after the inevitable fumbblings and errors of the first year—we established the policy of delaying the extension of support of any new field or area of practice in rehabilitation until after we had carefully assessed the need for such support and charted a course of action. From that policy we have not deviated.

To help us in our continuing survey of needs for training, we now have the advice of nine advisory panels. These panels, composed of leaders in professional education and leaders in practice in each professional field help us to determine, both quantitatively and qualitatively, the nature of the need for training personnel and the direction our support should go. They actually review the applications for training grants, appraise the progress made in past years and evaluate the proposed course of action for the coming grant year. Advisory panels are now operating in the fields of medicine, nursing, occupational therapy, physical therapy, prosthetics and orthotics, psychology, rehabilitation counseling, social work and speech pathology and audiology. Some of you in this room have served on such panels. Some of you are now serving in such a capacity and others of you in this room may be tapped for future service. In addition, we have from time to time sought the advice of advisory groups representative of rehabilitation services to blind

persons, deaf persons, and the mentally retarded, where the thinking of individuals from various fields is essential to a comprehensive approach.

It will take no imagination on your part to see that the Vocational Rehabilitation Administration may very well, in the near future, feel the need for an interdisciplinary advisory group composed of individuals with a deep commitment to improving the professional services that are now available to the person with a disability who wants to carry out his responsibilities for homemaking activities. I say interdisciplinary, for I have seen or heard nothing in this workshop that would modify the original thinking of our planning committee—that the problems of rehabilitating persons with physical handicaps is not the concern of a single professional field, but rather an area for sharing the contributions of several disciplines.

The Act under which we operate gives us broad authority to make training grants that hold promise of improving vocational rehabilitation services and thereby increasing the number of handicapped people who can be vocationally rehabilitated. And, as Ryrie Koch emphasized Sunday evening, homemaking is a legitimate vocational goal for some people. Homemaking is defined in our Regulations as a possible “remunerative occupation.”

Our law makes possible a flexible program of training grants. Grants can be made for a variety of purposes: (1) for planning training programs, including the development of pilot kinds of programs, curriculum innovations, experimentation with new or different instructional methods; (2) for recruitment programs to bring new personnel into a field; (3) for development of teaching materials, including audiovisual aids, films, tape recordings, educational TV, programmed instruction; (4) for evaluation of new or traditional ways of training; and (5) travelships, which are special awards given to carefully selected individuals for visits to clinical situations from which more could be learned than from an academic situation. All of these new and forward-looking purposes are in addition to the conventional tried and true methods of supporting training programs, such as teaching grants to educational institutions to help them expand their faculty and improve instruction, scholarship assistance for students to entice them into the training courses or to keep them from dropping out, and research fellowships. Finally, short-term training courses to help personnel already on the job keep abreast of new advances in medicine and rehabilitation and otherwise raise their level of knowledge and skill are an important and significant aspect of our training program.

The training program of the Vocational Rehabilitation Administration is deeply committed to uniting with professional associations and leaders in each professional field whenever their aspirations,

their strivings for improvement in the professional preparation of their personnel coincides with our mission—that of vocationally rehabilitating disabled people. As we have sat down with one professional group after another to identify common goals or mutual objectives, one ever-present need for improvement in the quality of both professional training and professional service to disabled people has become abundantly clear. You all know what it is—our capacity for, and skill in, inter-professional collaboration. And so our training program has a deep commitment for the support of training activities that are designed to produce the professional person—whatever his field—who can work cooperatively and flexibly with those in allied professional fields, who can have a firm sense of his own professional identity but who can adapt to the demands of specific administrative settings or to the needs of the local community without loss of the essential values of his own professional field.

Now let me try to give you a bit of a cross section of what this year's training grant picture looks like. Our total appropriation is \$13,300,000 this year. Of this amount about \$12,100,000 will be spent for support of long-term training. About \$1,200,000 will support about 125 short-term courses. In 1963 there is a VRA training grant in 60 of the 90 schools of medicine in the United States. In each case, the grant is used to establish a training program for undergraduate medical students in rehabilitation of disabled people. The exact nature of the training program varies widely, but in general it provides a means of giving medical students an awareness of problems of long-term illness and some understanding of the rehabilitation resources that can minimize resulting disability. There is a ray of comfort that about 55 percent of the currently enrolled medical students are having such an exposure to what the rehabilitation approach can accomplish.

In addition, every school of occupational therapy, physical therapy, social work, graduate school of nursing, graduate department of psychology and graduate program of speech pathology and audiology in the country now knows that it has an opportunity to secure a grant from the Vocational Rehabilitation Administration to expand or improve its curriculum offerings and to enlarge its student body. A large proportion of the schools of occupational therapy, physical therapy and social work are this year receiving VRA training grants. A very small proportion of schools of nursing and departments of psychology are now recipients of such grants. We hope that their numbers may soon increase.

Supplementary to these more orthodox, conventional approaches to the preparation of professional personnel, we have dared to experiment, to attempt new approaches, to encourage innovations.

Training blind persons to travel as independently as possible has been going on for many years. The Vocational Rehabilitation Administration, however, has located two universities willing and eager to tackle the problem of training mobility specialists. In cooperation with two major centers for the blind, these two universities have developed an academic program of 14 months, leading to a master's degree in education. Students have graduated, are now employed and are being instrumental in raising this area of service to a level of dignity and value in the rehabilitation team.

Home teachers of the blind are usually the first persons whom a newly blinded adult meets to help him back on the road to self-sufficiency and independence. Their duties have never been clearly delineated and there has never been an academic training program to prepare personnel for this occupation. This year we are starting one. It will be at the graduate level and lead to a master's degree.

In another area of practice, that of rehabilitation of the deaf, two new programs are now in operation, designed to produce leaders for the field. One leads to a master's degree in education; the other is at the doctoral level and attempts to give those with basic professional training in psychology, special education, social work, or counseling a knowledge of problems associated with deafness.

Now we have no valid research findings to support a conclusion—a hunch—that we in VRA have come to, but we are rather convinced of its truth. Over the years we have noted a strong positive correlation between attendance at short-term training courses—workshops, institutes or seminars—and the subsequent development of demonstration projects of service to disabled people. A notable instance is in the area of occupational adjustment and rehabilitation of mentally retarded adolescents and young adults. Another one is in the area of rehabilitation of patients who have been hospitalized for mental illness. Those States, regions and local areas that have had the vision and foresight to see the need for further training of their personnel and to demand it have in turn been rewarded by the development of additional facilities and resources to serve disabled people.

I hope that there will be no exception to the general rule in this area of rehabilitation of handicapped people for homemaking activities, and that we can look back at this workshop as having stimulated the development of programs of service, research and professional training.

APPENDIX

BIBLIOGRAPHIES

CHILD DEVELOPMENT

BOOKS

THE GENERAL FIELD OF CHILD GROWTH AND DEVELOPMENT

Burns, C. L. C. *Mental Health in Childhood*. Chicago: Fides Publishers Association, 1956.

Gessell, A., and Ilg, F. L. *Infant and Child in the Culture of Today*. New York: Harper and Brothers, 1943.

Gessell, A. *The First Five Years of Life*. New York: Harper and Brothers, 1940.

Heffernan, H., Editor. *Guiding the Young Child*. Boston: D. C. Heath and Co., 1959.

Hymes, J. L., Jr. *The Child Development Point of View*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1955.

Jersild, A. *Child Psychology*. Fifth Edition. Englewood Cliffs, N.J.: Prentice-Hall, 1960.

Mussen, P. H., and Conger, J. J. *Child Development and Personality*. New York: Harper and Brothers, 1956.

Seidman, J. M. *Child; A Book of Readings*. New York: Rinehart and Company, 1958.

FAMILY LIFE WITH EMPHASIS ON PARENT-CHILD RELATIONSHIPS

Duvall, E. M. *Family Development*. Chicago: J. B. Lippincott Company, 1957.

Gilbreth, L. M. *Living with Our Children*. New York: W. W. Norton and Co., Inc., 1951.

Gruenberg, S. M. *We, the Parents*. Revised Edition. New York: Harper and Brothers, 1948.

Kellogg, R. *Babies Need Fathers Too*. New York: Comet Press Books, 1954.

SUPERVISION AND DISCIPLINE (GUIDANCE AND DIRECTION)

Child Study Association of America, Inc. *Parents' Questions*. Revised Edition. New York: Harper and Brothers, 1947.

Hymes, J. L. *Behavior and Misbehavior*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1955.

Langdon, G., and Stout, I. W. *Discipline of Well-Adjusted Children*. New York: John Day and Company, 1952.

CHILD CARE (AND CHILDREN'S NUTRITION)

Duncan, E. S. *Parents' Magazine Book of Baby Care*. New York: McGraw-Hill Book Co. Publishing Co., 1952.

Gruenberg, S. M., Editor. *The Encyclopedia of Child Care and Guidance*. New York: Doubleday and Company, 1954.

Holt, E. L. *The Good Housekeeping Book of Baby and Child Care*. New York: Appleton-Century-Crofts, Inc., 1957.

Kanner, L. *A Word to Parents about Mental Hygiene*. Madison, Wisconsin: University of Wisconsin Press, 1957.

Sears, R. R., Maccoby, E. E., and Levin, H. *Patterns of Child Rearing*. Evanston, Illinois: Row, Peterson & Company, 1957.

Spock, B. *Common Sense Book of Baby and Child Care*. New York: Duell, Sloan, and Pearce, Inc., 1954; Pocket Book Edition: *Baby and Child Care*. New York: Pocket Books, Inc., 1957.

CHILDREN'S PLAY

Farina, A. M., Smith, J. M., and Furth, S. H. *Growth through Play*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1959.

Hartley, R., and Goldenson, R. M. *Complete Book of Children's Play*. New York: Thomas Y. Crowell, 1957.

Mulac, M. E. *Fun and Games*. New York: Harper and Brothers, 1956.

CREATIVE EXPERIENCE FOR CHILDREN

Andrews, G. *Creative Rhythmic Movement for Children*. Englewood Cliffs, N.J.: Prentice Hall, Inc., 1956.

Crowninshield, E. *Stories That Sing*. Boston: Boston Music Co., 1945.

Gardner, D. E. M. *Education of Young Children*. London, W.C. 2: Methuen and Co., Ltd., 36 Essex Street, 1956.

Hymes, J. L. *Before the Child Reads*. Evanston, Ill.: Row, Peterson & Company, 1958.

Lowenfeld, V. *Your Child and His Art: A Guide for Parents*. New York: Macmillan Co., 1954.

Sheehy, E. D. *There's Music in Children*. Revised Edition. New York: York: Henry Holt, 1952.

Wright, S. *Gardening: A New World for Children*. New York: Macmillan Co., 1957.

Ward, M. *Young Minds Need Something to Grow On*. Evanston, Illinois: Row, Peterson & Company, 1957.

FOR TEACHING ABOUT CHILDREN

Bernert, E. H. *America's Children*. New York: John Wiley & Sons, Inc., 1958.

Brody, S. *Patterns of Mothering: Maternal Influence During Infancy*. New York: International Universities Press, Inc., 1956.

Davis, W. A., and Havighurst, R. H. *Father of the Man*. Boston: Houghton Mifflin, 1947.

Harris, D. *The Concept of Development*. Minneapolis: University of Minnesota Press, 1957.

Josselyn, I. M. *Happy Child: A Psychoanalytic Guide to Emotional and Social Growth*. New York: Random House, 1955.

Murphy, L. B. and Associates. *Personality in Young Children*. Vol. I: *Methods for the Study of Personality in Young Children*. Vol. II: *Colin—A Normal Child*. New York: Basic Books, Inc., 1956.

———. *The Widening World of Childhood*. New York: Basic Books Inc., 1963.

Witmer, H. L., Editor. *Pediatrics and the Emotional Needs of the Child*. New York: The Commonwealth Fund, 1948.

Witmer, H. L., and Kotinsky, R. *Personality in the Making*. New York: Harper and Brothers, 1952.

PAMPHLETS

Children's Bureau, U.S. Department of Health, Education, and Welfare. *Infant Care*. Children's Bureau Publ. No. 8.

Your Child from One to Six. Children's Bureau Publ. No. 30, 1962. Washington 25, D.C.: U.S. Government Printing Office.

Landeck, B. *Time for Music*. Public Affairs Pamphlet No. 260. New York: Public Affairs Committee, Inc., 1958.

Senn, J. E. *Fads and Facts as the Bases of Child-Care Practices*. New York: Play Schools Association, 41 W. 57th Street.

CLOTHING

See also references accompanying paper by Elizabeth Wagner.

Books

GENERAL INFORMATION

Bane, A. *Creative Sewing*. New York: McGraw-Hill Book Company, 1956.

Chambers, H. G., and Moulton, V. *Clothing Selection*. Philadelphia:

J. B. Lippincott Co., 1961.

Simplicity Sewing Book. New York: Simplicity Pattern Co., Inc., 1962.

Tate, M. T., and Glisson, O. *Family Clothing*. New York: John Wiley & Sons, Inc., 1961.

Bulletins, Leaflets, Pamphlets

GENERAL INFORMATION

Davis, V. *Self-help Fasteners for Children's Clothing*. Amherst, Mass.: Univ. of Mass., Exten. Serv. Leaflet 281, 1955.

Moeller, F., and Tingley, K. A. *Children and Their Clothing*. Storrs, Conn.: Univ. of Conn. Exten. Serv. of the Coll. of Agr., 1952, reprinted 1954.

Streufert, H. *Buying Children's Clothing*. Pacific Northwest Coop. Exten. Publ. Corvallis, Ore.: Oregon State Univ. PNW Bulletin 46, 1961.

SPECIFICALLY RELATED TO THE HANDICAPPED

Arthritis Self-Help Device Office. *Device News*. New York: Institute of Physical Medicine and Rehabilitation.

Bare, C., OTR, Boettke, E., and Wagoner, N. *Self-Help Clothing for Handicapped Children*. Chicago,

National Society for Crippled Children and Adults, 1962.

Boettke, E. M. *Suggestions for Physically Handicapped Mothers on Clothing for Preschool Children*. Storrs, Conn.: School of Home Economics, University of Conn., 1957.

Boettke, E. M. and Martin, B. *Reference Material on Clothing for Preschool Children*. Storrs, Conn.: School of Home Economics, Univ. of Conn. References used in preparation of the preceding bulletin.

Brett, Betty. *Dresses for Handicapped Children*. The Greenhouse, Inc., 6 East 32nd St., New York 16, N.Y. (Catalogue of dresses designed by Betty Brett.)

Cookman, H., and Zimmerman, M. E., OTR. *Functional Fashions for the Physically Handicapped*. Patient Publication No. III. New York: Institute of Physical Medicine and Rehabilitation, 1961.

JOURNAL ARTICLES AND REPRINTS

Brown, M. E. Fashions for cerebral palsied. *Cerebral Palsy Review* 12, No. 8 (Sept. 1951), pp. 3-5, 8.

Bryce, T. E. Velcro. *Canadian J. of Occupational Therapy* 27, No. 3, (Sept. 1960), pp. 77-80.

Kent, G. Velcro: newest magic fastener. *Reader's Digest*, 74, No. 443 (March 1959), pp. 7-8, 10.

Ward, M. M. Self-help fashions for the physically disabled child. *Am. J. of Nursing* 58, No. 4 (April 1958), pp. 526-527.

EXHIBITS

DRESSES FOR HANDICAPPED CHILDREN

Garments designed by Betty Brett. The Greenhouse, Inc., 6 East 32nd St., New York 16, N.Y.

CLOTHES FOR THE PHYSICALLY LIMITED HOMEMAKER

A collection of the 20 garments and articles illustrated in the USDA Home Economics Report No. 12. Each garment and article bears information suited to display on rack. Textiles and Clothing Laboratory, Clothing and Housing Research Division, U.S. Department of Agriculture, Washington 25, D.C.

Colored photographs of garments in above exhibit in easel-type album.

FUNCTIONAL FASHIONS

A collection of some of the garments developed under the research on clothing for handicapped men and women supervised by Helen Cookman. National Society for Crippled Children and Adults, 2023 West Ogden Ave., Chicago 12, Illinois.

SELF-HELP CLOTHING FOR HANDICAPPED CHILDREN

A collection of children's garments selected from the retail market with adaptations to suit disabilities. Eight accompanying charts denote features to look for. National Society for Crippled Children and Adults.

SELF-HELP CLOTHING FOR PRE-SCHOOL CHILDREN

A set of eight garments that show how a handicapped homemaker may save energy and time by using care in the selection of clothing for her preschool children. The special features that are demonstrated include self-help, growth, comfort, wear, and easy care. Also included in this exhibit are: eight 7-inch by 9-inch mounted photographs of children wearing the garments. Handicapped Homemaker Research Center, University of Connecticut, Storrs, Connecticut. \$3.

FILMS, FILMSTRIPS, SLIDES

See general list following the bibliographies.

FAMILY RELATIONS

Books

GENERAL INFORMATION

Blood, R. O., *Marriage*. New York: The Free Press of Glencoe Inc., 1962.

Bowman, H. A. *Marriage for Moderns*. Fourth Edition. New York: McGraw-Hill Book Company, 1960.

Cavan, R. S. *American Marriage; A Way of Life*. New York: Thomas Y. Crowell, 1959.

Duvall, E. M., and Hill, R. L. *Being Married*. New York: Association Press, 1960.

Havemann, E. *Men, Women, and Marriage*. New York: Doubleday and Co., Inc., 1962.

Himes, N. E., and Taylor, D. L. *Your Marriage*. New York: Rinehart and Co., Inc., 1955.

Landis, J. T., and Landis, M. G. *Building a Successful Marriage*. Third Edition. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1958.

Levy, J., and Munroe, R. *The Happy Family*. New York: Alfred A. Knopf, Inc., 1938.

Mace, D. R. *Success in Marriage*. Nashville, Tennessee: Abingdon, 1958.

Peterson, J. A. *Education for Marriage*. New York: Charles Scribner's Sons, 1956.

MORE COMPREHENSIVE REFERENCES

Blood, R. O., Jr., and Wolfe, D. M. *Husbands and Wives, The Dynamics of Married Living*. New York: The Free Press of Glencoe Inc., 1960.

- Christensen, H. T. *Marriage Analysis*. Second Edition. New York: The Ronald Press Co., 1958.
- Duvall, E. *Family Development*. Second Edition. Philadelphia: J. B. Lippincott Co., 1962.
- Kenkel, W. F. *Family in Perspective*. New York: Appleton-Century-Crofts, 1960.
- Kephart, W. M. *The Family, Society, and the Individual*. Boston: Houghton Mifflin, 1961.
- Kirkpatrick, C. *Family: As Process and Institution*. New York: The Ronald Press Co., 1955.
- LeMasters, E. E. *Modern Courtship and Marriage*. New York: The Macmillan Co., 1957.
- Polatin, P., MD, and Philtine, E. C. *Marriage in the Modern World*. Philadelphia: J. B. Lippincott Co., 1956.
- Porterfield, A. L. *Marriage and Family Living as Self-Other Fulfillment*. Philadelphia: F. A. Davis Company, 1962.
- Waller, W. *The Family, A Dynamic Interpretation*. New York: The Dryden Press, 1951.
- SPECIAL FAMILY PROBLEMS**
- Apton, A. A. *The Handicapped: A Challenge to the Non-Handicapped*. Chicago: Citadel Press, 1959.
- Beutner, K. R., and Hale, N. G., Jr. *Emotional Illness: How Families Can Help*. New York: G. P. Putnam's Sons, 1957.
- Blaine, G. B., Jr. *Patience and Fortitude*. Boston: Little Brown & Co., 1962.
- Garrett, J. F., Editor. *Psychological Aspects of Physical Disability*. Washington, D.C.: Vocational Rehabilitation Administration, Department of Health, Education, and Welfare. 60 cents. No. 210, 1952.
- Liebman, S. *Emotional Forces in the Family*. Philadelphia: J. B. Lippincott Co., 1959.
- McDonald, E. T. *Understand Those Feelings*. Pittsburgh: Stanwix House, Inc., 1962.
- Peszczyński, M., and Fowles, B. H. *Home Evaluations*. Cleveland, Ohio: Highland View Cuyahoga County Hospital, 1957.
- Rusk, H. A., and Taylor, E. J. *New Hope for the Handicapped*. New York: Harper and Brothers, 1949.
- Viscardi, H., Jr., *A Letter to Jimmy*. New York: Paul S. Eriksson, Inc., 1962.
- Wilke, H. *Strengthened with Might*. Philadelphia: Westminster Press, 1952.
- Wright, B. A. *Physical Disability—A Psychological Approach*. New York: Harper and Row, 1960.

BULLETINS, LEAFLETS, PAMPHLETS

GENERAL INFORMATION AND SPECIAL PROBLEMS

Association for the Aid of Crippled Children, 345 East 46th St., New York 17, N.Y.:

The Place of Persons with Disabilities in Our Society, 1957.

Child Study Association of America, Inc., 9 E. 89th St., New York 28, N.Y. Among their publications are:

Mayer, G., and Hoover, M. *When Children Need Special Help with Emotional Problems*. 1961.

Redl, F. *Are Parents Worrying About the Wrong Things?*

Wolf, A. W. M., and Dawson, M. C. *What Makes a Good Home?* 1956.

The Hogg Foundation for Mental Health, The University of Texas, Austin 12, Texas:

Alexander, F., MD. *Emotional Maturity*. Reprinted from Illinois Society for Mental Hygiene *Mental Health Bulletin*, Nov.-Dec. 1948.

Bowman, H. A. *The Nature of Mental Health*. Reprinted from *General Federation Clubwoman Magazine*, Oct. 1957.

Frank, J. D., MD. *Are You a Guilty Parent?* Reprinted from *Harper's Magazine*, April 1957.

McDonald, E. C., Jr. *Understanding Boys and Girls Who Have Problems*. 1957 (4th printing, 1961).

Moore, B. M. *Adults Look at Children's Values*. Reprinted from *Childhood Education*, Feb. 1956 (3rd printing, 1961).

———. *Our Concern: Children and Youth*. 1951 (2nd printing, 1961).

———. *These Are Today's Fundamentals*. Reprinted from *Childhood Education*, Sept. 1958.

Moore, B. M., and Moore, H. E. *The Emotional Climate of Our Times*. 1959.

Moore, B. M., and Smith, B. K. *Families are Forever. "Fulfillments of Maturity"*. 1959 (3rd printing, 1961).

Peck, R. F. *What Is Normal?* Reprinted from *The Alcalde*, Jan. 1961.

Prescott, D. A. *Role of Love in Human Development*. Reprinted from *J. Home Econ.*, March 1952.

Rogers, C. R. *Becoming a Person*. 1956 (4th printing, 1961).

Spock, B., MD. *What We Know About the Development of Healthy Personalities in Children*. Reprinted from *Understanding the Child*, Jan. 1951.

National Society for Crippled Children and Adults, Inc., 2023 W. Ogden Ave., Chicago 12, Illinois:

Linck, L. J. *You Are Not Alone . . . Help for Your Child*. Parent Series No. 4. 1959.

Miers, E. S. *Why Did This Have to Happen?* 1957.

Shriner, M. *Growing Up—Cerebral Palsied Children Learn To Help Themselves*. Parent Series No. 7. 1961.

Spock, B., MD. *On Being a Parent—of a Handicapped Child*. 1961.

Paralyzed Veterans of America, 7521 Roslyn St., Swissvale 18, Pennsylvania:

Farkas, J. J. *Where Turning Wheels Stop*. 1960.

Public Affairs Pamphlets, 22 E. 38th St., New York 16, New York.

Their catalogue lists some fifty titles under the heading of *Family Life*. Representative titles include:

Blakeslee, A. L. *How to Live With Heart Trouble*. No. 184. 1952.

Duvall, E. M. *Building Your Marriage*. No. 113. 1946 (26th printing, 1961).

Duvall, E. and S. *Saving Your Marriage*. No. 213. 1954 (4th printing, 1961).

Mace, D. R. *What Makes a Marriage Happy?* No. 290. 1959.

Neisser, E. *How To Be a Good Mother-in-law and Grandmother*. No. 174. 1951 (9th printing, 1961).

Pratt, D., MD, and Neher, J. *Mental Health Is a Family Affair*. No. 155, 1949 (16th printing, 1962).

Saltman, J. *Meeting the Challenge of Cerebral Palsy*. No. 158. 1960.

———. *Paraplegia: A Head, A Heart, and Two Big Wheels*. No. 300. 1960.

Stevenson, G. S., MD, and Milt, H. *Tensions—How to Master Them*. No. 305. 1960 (3rd printing, 1962).

Switzer, M. E., and Rusk, H. A. *Doing Something for the Disabled*. No. 197. 1953.

Wishik, S. M., MD. *How To Help Your Handicapped Child*. No. 219. 1955.

Yahraes, H. *Gains for Handicapped Children*. No. 212. 1954.

Science Research Associates, 259 East Erie Street, Chicago 11, Illinois.

Following are a few of the many titles to be found in their catalogue.

Adams, C. R. *Looking Ahead to Marriage*.

English, O. S. *A Guide to Successful Fatherhood*.

Ullman, F. *Getting Along with Brothers and Sisters*. 1952 (reprinted 1960).

Veterans Administration, Washington 25, D.C.:

Nicholas, C. *Counseling Handicapped Adolescents*. V.A. Pamphlet 22-2. 1958. 20 cents. Available from the Superintendent of Documents, Government Printing Office.

BIBLIOGRAPHIES

Books of the Year. Published annually by the Child Study Association of America, Inc., 9 E. 89th St., New York 28, N.Y. Section 1—books for children; Section 2—books for parents and professional workers.

Family Life, Literature and Films. A comprehensive list of books, films, and pamphlets published by the Minnesota Council on Family Life, 1219 University Ave., S.E., Minneapolis 14, Minnesota, 1962.

Family Life References, A Selected

Annotated Bibliography. 1961-62. Compiled by Cannon, K. L., Carter, D. C., Porter, B. M., and Dyer, D. T. Utah Council on Family Relations, Department of Family Living and Child Development, Utah State University Logan, Utah, (c/o C. Jay Skidmore).

Recent Books About Handicapped Persons—a Checklist of Popular Fiction and Biography. Published by National Society for Crippled Children and Adults, 2023 W. Ogden Ave., Chicago 12, Illinois.

REPRINTS

- Auerbach, A. B. Group education for parents of the handicapped. *Children* 8, No. 4 (July-Aug. 1961), pp. 135-140.
- Buck, McK., Life with a stroke. *Rehabilitation Literature*, Dec. 1957.
- Christopherson, V. A. Role modifications of the handicapped homemaker. *Rehabilitation Literature* 21, No. 4 (April 1960), pp. 110-117.
- Christopherson, V. A. The patient and the family. *Rehabilitation Literature* 23, No. 2 (Feb. 1962), pp. 34-41.
- Deutsch, C. P., and Goldston, J. A. Family factors in home adjustment of the severely disabled. *Marriage and Family Living* 22, Nov. 1960, pp. 312-16.
- Hill, R. Generic features of families under stress. *Social Casework* 39, Feb.-March 1958, pp. 139-50.
- Horwitz, B. An open letter to the family of an adult patient with aphasia. *Rehabilitation Literature* 23, No. 5 (May 1962), pp. 141-144.
- Jordan, T. E. Research on the handi-

- capped child and the family. *Merrill-Palmer Quarterly* 8, No. 4, Oct. 1962.
- Menninger, W. C., MD. Angels unaware. *Crippled Child* 32, No. 6 (April 1955), pp. 4-7, 27. Reprinted under title: How are you—emotionally?
- Reisner, W. L. A stroke needn't strike you out. *Crippled Child*, April-June 1958.
- Rusk, H.A., MD, and Novey, J. The impact of chronic illness on families. *Marriage and Family Living* 19, No. 2 (May 1957), pp. 193-197.
- Wendland, L. V. A therapeutic group with husbands and wives of poliomyelitic patients. *Group Psychotherapy* 8, No. 1 (April 1955), pp. 25-32.
- Wendland, L. V. Should the handicapped consider marriage? *Accent on Living* 5, No. 1, Summer 1960, pp. 14-16.
- FILMS, FILMSTRIPS, SLIDES**
- See general list following the bibliographies.

HOME MANAGEMENT

BOOKS

- Gilbreth, L. M., Thomas, O. M., and Clymer, E. *Management in the Home*. New York: Dodd, Mead and Co., 1959. One chapter is written specifically for the handicapped homemaker.
- Goodyear, M. R., and Klohr, M. C. *Management for Effective Living*. New York: John Wiley & Sons, Inc., 1954.
- Gross, I. H., and Crandall, E. W. *Management for Modern Families*. New York: Appleton-Century-Crofts, Inc., 1954. (Second edition expected in late spring.)
- Laird, D., and Eleanor, C. L. *The Dynamics of Personal Efficiency*. New York: Harper and Brothers, 1961.

- Lehrer, R. N. *Work Simplification*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1957.
- Nickell, P., and Dorsey, J. M. *Management in Family Living*. Third Edition. New York: John Wiley & Sons, Inc., 1959.
- Peet, L. J. *Young Homemakers' Equipment Guide*. Ames, Iowa: Iowa State University Press, 1963.
- Swift, H. and E. *Running a Happy Family*. New York: The John Day Co., 1960.
- Updegraff, R. R. *All the Time You Need*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1958.
- Wright, R. and M. *Guide to Easier Living*. New Revised Edition. New York: Simon and Schuster, 1954.

BULLETINS, LEAFLETS, PAMPHLETS

GENERAL INFORMATION

- Beck, G. J., and Woodruff, L. *Is There a Better Way?* Columbia, Mo.: Univ. of Missouri, Agr. Exten. Serv. Circular 694, Jan. 1959.
- Bell, H. E. *How Many Persons is a Homemaker?* University Park, Penn.: Coop. Agr. and Home Econ. Exten. Serv., Leaflet 223. The Penn. State Univ., Dec. 1959.
- Beltsville Energy-Saving Kitchen Design No. 2. Washington, D.C.: U.S.

- Dept. of Agriculture Leaflet 463, Nov. 1959.
- Beyer, G. H., Editor, and Weiss, F. *The Cornell Kitchen*. Ithaca, N.Y.: Cornell Univ. Agr. Expt. Sta. and N.Y. State Coll. of Home Econ. and Cornell Univ. Housing Research Center, 1952.
- Dale, V. M. *The Homemaker's 100-Hour Week*. Amherst, Mass.: Univ. of Mass., Coop. Exten. Serv. Leaflet 301, Nov. 1956.

Deneke, L. M. S., and Beall, T. *Laundry the Easier Way*. Columbus, Ohio: Ohio State Univ., Agr. Exten. Serv. Bull. 379, Oct. 1958.

A Discussion of Family Money. New York, N.Y.: Women's Division, Institute of Life Insurance, 488 Madison Avenue, New York 22.

Grady, E. R. *Body Mechanics in Homemaking Tasks*. Kingston, R.I.: Univ. of R.I., College of Home Economics, Jan. 1954.

Heiner, M., and Steidl, R. *Let Your Kitchen Arrangement Work for You*. Ithaca, N.Y.: Cornell Univ., Coop. Exten. Serv. Bull. 814, New York State Coll. of Home Econ., Feb. 1957.

Howard, M. S., Thye, L. S., and Tayloe, G. K. *The Beltsville Kitchen-Workroom with Energy-Saving Features*. Washington, D.C. U.S. Dept. of Agriculture, Home and Garden Bulletin 60, Nov. 1958.

Kettunen, R. C. *Take It Easy*. Series of pamphlets, 1956-1958.

Plan Your Kitchen to Take It Easy. Exten. Folder F-257.

Take It Easy By the Way You Use Your Body. Exten. Folder F-257.

Take It Easy When Cleaning. Exten. Folder F-213.

Take It Easy in the Laundry. Exten. Folder F-214.

East Lansing, Mich.: Mich. State Univ., Coop. Exten. Serv.

Noyes, H. *Doing the Dishes*. Pullman, Wash.: State Coll. of Wash., Exten. Serv., Exten. Bull. 465, June 1958.

Pardee, E. A., and Morris, C. K. *Improve Your Household Storage*. East Lansing, Mich.: Mich. State Univ., Coop. Exten. Serv., Exten. Bull. 360, Jan. 1959.

Richardson, M., and McCracken, E. C. *Energy Expenditures of Women Performing Selected Activities*. Home Economics Research Report 11. Washington, D.C.: Agr. Research Serv., U.S. Dept. of Agr., Dec. 1960.

Sanderson, F. and Pretzer, H. *Easy Does It*. Series of six leaflets. Detroit, Mich.: Dept. of Home Econ., Wayne State University, 1951-1954.

Smith, L. *Clip Time from Meal Preparation*. Ames, Iowa: Iowa State Univ., Coop. Exten. Work in Agr. and Home Econ., Exten. Bull. FS-626. Reprint from *Iowa Farm Science*, Nov. 1955, pp. 8-10, 96-98.

Steidl, R. E. *Arrangement of Kitchen Centers*. Ithaca, N.Y.: Cornell Univ., Coop. Exten. Serv., Cornell Exten. Bull. 1028 (reprint).

Strawn, B. *Better Kitchen Storage*. Corvallis, Ore.: Oregon State Univ.,

Pacific Northwest Coop. Exten. Publ. 47, Dec. 1961.

Strawn, B. *Work Smarter—Not Harder*. Corvallis, Ore.: Oregon State Univ., Pacific Northwest Coop. Exten. Publ. 799, Oct. 1961.

Walker, F. *Making Time Plans*. Storrs, Conn.: Univ. of Conn., Coop. Exten. Serv., Aug. 1960 (Mimeo).

Williamson, L. J., Warren, E. C., and MacDonald, J. *A Housecleaning Handbook*. Ithaca, N.Y.: Cornell Univ. Coop. Exten. Serv., N.Y. State Coll. of Home Econ., Exten. Bull. 950 (reprint).

Wood, M. W., Hill, A. D., Amidon, E. P. *Management Problems of Homemakers Employed Outside the Home*. Home Econ. Educ. Series No. 33; OE-S3009. Washington, D.C.: Government Printing Office, 1961.

HOME MANAGEMENT RELATED TO THE HANDICAPPED

Fish, H. U. *Take It Easy*. Seattle, Wash.: Washington State Heart Assoc., Arcade Bldg., 1961.

The Physically Handicapped Housewife. Stockholm, Sweden: Swedish Central Committee for the Welfare of Cripples. International Soc. for the Rehabilitation of the Disabled, 701 First Ave., New York 17, N.Y. Translated into English.

The Heart of the Home. New York, N.Y.: Am. Heart Assoc., 44 East 33rd St., 1950. Available from local Heart Associations.

Homemaking Hints. New York, N.Y.: National Tuberculosis Assoc., 1790 Broadway, New York 19, N.Y., 1954.

Judson, J. S., Wagner, E., OTR, and Zimmerman, M. E., OTR. *Homemaking and Housing for the Disabled in the United States of America*. Rehabilitation Monograph XX. New York: The Institute for Physical Medicine and Rehabilitation, 1962.

McCullough, H. E., and Farnham, M. B. *Kitchens for Women in Wheelchairs*. Urbana, Ill.: Univ. of Ill., Agr. Exten. Serv. Circular 841, 1961.

———. *Space and Design Requirements for Wheelchair Kitchens*. Urbana, Ill.: Univ. of Ill., Agr. Expt. Sta. Bull. 661, June 1960.

Sewing and House Cleaning Units for Cardiac Homemakers. Univ. Park, Penn.: Penn. State Univ., Coll. of Home Econ. Publ. 175, June 1960.

Zmola, G. M. *You Can Do Family Laundry—With Hand Limitations*. Storrs, Conn.: Univ. of Conn., Home Econ. Research Center, School of Home Econ., March 1959.

TRAINING MANUALS IN HOMEMAKER REHABILITATION

Cardiac Efficiency Kitchen and Laundry Training Manual (Revised). Buffalo, N.Y.: Chronic Disease Research Institute, Univ. of Buffalo, 1955. A manual for use by non-medical personnel training for work in rehabilitation. Includes questionnaires and lists used in work with handicapped homemakers.

Rusk, H., MD, Kristeller, E., MD, Judson, J. S., Hunt, G. M., RN, and Zimmerman, M., OTR. *A Manual for Training the Disabled Homemaker*. Rehabilitation Monograph VIII. Sec-

ond Edition. New York: The Institute of Physical Medicine and Rehabilitation, 1961. Helpful information on ways to organize service programs and suggestions for equipment and methods of training the handicapped homemaker.

The Therapist's Guide in a Homemaker's Program. Curative Workshop of Milwaukee, Inc., 750 North 18th St., Milwaukee 3, Wisc., 1962. A manual designed by those who train the disabled to carry on the ordinary homemaking functions.

BIBLIOGRAPHY

Callender, M. C., Corcoran, S. P., and Minden, M. B. *Bibliography on Home Management With Emphasis on Work Simplification for Physically Handi-*

capped Homemakers. Storrs, Conn.: School of Home Economics, Univ. of Conn., 1960.

JOURNAL ARTICLES AND REPRINTS

Hossack, J. R. Home management for the disabled. *Am. J. of Occupational Therapy* 10, July-Aug. 1956, pp. 143-146, 174. (Reprint.)

Howard, M. S. Energy-saving kitchens—a basic approach to design of work areas. *J. Am. Dietetic Assoc.* 39, No. 10 (Sept. 1961), pp. 201-204.

Johnston, B. J. Work simplification for handicapped homemakers. *Forecast for Home Economics*, Feb. 1960 (Reprint).

Moore, B. M. Time, tension, and mental health. *J. of Home Econ.* 49, No. 10 (Dec. 1957), pp. 759-763.

FILMS, FILMSTRIPS, SLIDES

See general list following the bibliographies.

HOUSING

HOUSE PLANS

American Home Laundry Manufacturers' Assoc. *Plan for All Three*. Chicago 6: The Association, 20 N. Wacker Drive, undated.

American Institute of Architects. *Buildings for the Handicapped and/or Aged*. Washington, D.C.: The Institute, 1952. Originally published in the *Bull. of the Am. Inst. of Architects* 5, No. 6 (Nov. 1951), pp. 1-14; and 6, No. 1 (Jan. 1952), pp. 1-18.

American Institute of Architects, New York Chapter; in cooperation with American Red Cross, New York Chapter; and Paralyzed Veterans Association, Halloran Division. *Standard Units: Homes for Paraplegics*, Washington, D.C.: American Red Cross, 1947.

Architect's Check List. Housing and Home Finance Agency, Public Hous-

ing Administration, Washington 25, D.C., 1962.

Ehrlich, J. Wheelchair house for fingertip living. *Crippled Child* 27, No. 2 (July-Aug. 1949), pp. 11-13.

Elmer, C. D. *A Study to Determine the Specifications of Wheelchair Ramps*. Master's thesis, University of Iowa, Iowa City, 1957.

Fritch, V. Trailers for paras. *Paraplegia News* 15, No. 10 (Dec. 1961), p. 160.

Functional Home for Easier Living. New York: The Institute of Physical Medicine and Rehabilitation, 1959.

Hopper, D. A., Jr. Life can be much more livable in homes for the handicapped when you remember little details. *Crippled Child* 31, No. 1 (June 1953), pp. 8-9.

House of Freedom. Douglas Fir Plywood Association, Tacoma 2, Washington, 1960.

Johnson, M. Wheelchair house in Parke Ridge. *Crippled Child* 27, No. 1 (June 1949), pp. 12-13.

McCullough, H. E. *Laundry Areas*. Urbana, Ill.: Small Homes Council, Univ. of Ill. Circular Series C 5.4, Dec. 1957.

———. *Space Design for Household Storage*. Urbana, Ill.: Univ. of Ill., Agr. Expt. Sta. Bull. 557, August 1952.

McCullough, H. E., and Farnham, M. B. *Space and Design Requirements for Wheelchair Kitchens*. Urbana, Ill.: Univ. of Ill., Agr. Expt. Sta. Bull. 661, June 1960.

McCullough, H. E., Philson, K., Smith, R. H., Wood, A. L., and Woolrich, A. *Space Standards for Household Activities*. Urbana, Ill.: Univ. of Ill. Coop. Exten. Serv., Agr. Expt. Sta. Bull. 686, May 1962.

Reach for Safety—Body Mechanics Manual. National Steel Products Co., 424 N. Mansfield, Los Angeles, California, 1957.

Safety Check List for the Aging and the Handicapped. National Society for Crippled Children and Adults, Chicago, Illinois.

Selden, W. A. Wheelchair house. *Crippled Child* 26, No. 6 (April 1949), pp. 4-6. (Reprint.)

Hazard-Free Houses For All. Urbana, Ill.: Small Homes Council, Univ. of Ill. Circular Series C 1.1, Nov. 1958.

Turner, T. A. Houses for the handicapped. *Today's Health* 35, Aug. 1957, pp. 20-23.

Waldschmidt, P. *Home Wiring for Physically Limited*. National Electric Products, Pittsburgh, Penn., undated. *Wheelchair Houses*. Second Edition. Paralyzed Veterans of America, Swissvale, Penn. (Available free of charge to any paraplegic, civilian or veteran) Shows incline-type home elevator.

KITCHEN PLANNING

Beltsville Energy-Saving Kitchen Design No. 2. U.S. Dept. of Agriculture Leaflet No. 463. Washington, D.C.: Government Printing Office, Nov. 1959.

Easy Does It—Kitchen Quiz. Leaflet No. 6. Michigan Heart Association, Dept. of Home Economics, Wayne State University, Detroit, Michigan, undated.

The Heart of the Home. New York: American Heart Association, 1950. Also available from local Heart Associations.

Howard, M. S., Thye, L. S., and Tayloe, G. K. *The Beltsville Kitchen-*

Workroom with Energy-Saving Features. U.S. Dept. of Agr. Home and Garden Bulletin No. 60. Washington, D.C.: U.S. Gov. Printing Office, Nov. 1958.

Jane Foster's Heart Kitchen. Electric Cooking Institute, 68 W. Adams St., Chicago, Illinois, 1952.

Kettunen, R. C. *Plan Your Kitchen to Take It Easy*. East Lansing, Mich.: Mich. State Univ. Coop. Exten. Serv., Exten. Folder F-217, Dec. 1957.

McCullough, H. E., and Farnham, M. B. *Kitchens for Women in Wheelchairs*. Urbana, Ill.: Univ. of Ill., Coll. of Agr. Exten. Serv. in Agr. and Home Econ. Circular 841, Nov. 1961.

Pardee, E. A., and Morris, C. K. *Improve Your Household Storage*. East Lansing, Mich.: Mich. State Univ. Coop. Exten. Serv., Exten. Bull. No. 360, Jan. 1959.

Rusk, H. A., MD, Kristeller, E., MD, Judson, J. S., Hunt, G., RN, Zimmerman, M., OTR. *Manual for Training the Disabled Homemaker*. Rehabilitation Monograph VIII. New York: The Institute of Physical Medicine and Rehabilitation, 1955.

HOUSING THE AGING

Building for Older People: Financing, Location, Construction, Administration. Proceedings of two conferences, June 1960 and March 1961, sponsored by the Council. New York: The National Council on the Aging, 1961.

Buildings for the Aging. A reprint of 7 articles from *Architectural Record* 119, May 1956, pp. 191-226. New York: The National Council on the Aging.

Cowgill, C. H. *Facilities for the Aging and Infirm*. *American Institute of Architects J.*, May and July 1960. Available as a reprint: AIA Bldg. Type Reference Guide, BTRG 8-4-5, from AIA, Washington, D.C.

Donahue, W., Editor. *Housing the Aging*. Ann Arbor, Mich.: University of Michigan Press, 1954.

Kira, A. Housing needs of the aged. *Rehabilitation Literature* 21, No. 12 (Dec. 1960), pp. 370-377. Includes guide to functional planning for the elderly and handicapped.

Mathiasen, G., and Noakes, E. H. *Planning Homes for the Aged*. Architectural drawings. New York 18, N.Y. F. W. Dodge Corporation, 119 W. 40th St., 1959.

Standards of Design: Housing for the Elderly. Massachusetts State Housing Board, Boston. 1954.

Steinberg, H. A. *A Check-List for Retirement Homes*. Urbana, Ill.: Small Homes Council, University of Ill., 1958.

ARCHITECTURAL BARRIERS

Architectural Barriers Kit. National Society for Crippled Children and Adults, Chicago. Includes, with other flyers and fact sheets: *Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped*. American Standard Specifications. New York: American Standards Association, 1961. (Also available from the ASA.)

Nugent, T. *Design of Buildings to Permit Their Use by the Physically Handicapped*. Washington, D.C., Building Research Institute, 2101 Constitution Ave., N.W. 1960. (Also available from the Institute.)

Architectural Barriers and the Handicapped. The President's Committee on Employment of the Physically Handicapped, Washington, D.C. 1962.

Kiff, A. N. Front door citizen. *Crippled Child* 33, No. 4 (Dec. 1955), pp. 10-12, 29. Reprint.

Public Buildings and the Handicapped, A Fact Sheet. The President's Committee on Employment of the Physically Handicapped. A jointly sponsored project with the American Standards Association and the National Society for Crippled Chil-

dren and Adults. Washington, D.C.: Government Printing Office, 1962.

BIBLIOGRAPHIES

Architectural Barriers—See information under this heading.

Architectural Planning Bulletin 2. Revised. Chicago: National Society for Crippled Children and Adults, 1961.

Housing for the Aged. New York 17: The National Council on the Aging, 345 E. 46th St., June 1962.

Judson, J. S., Wagner, E., and Zimmerman, M. *Homemaking and Housing for the Disabled in the United States of America*. Rehabilitation Monograph XX. New York: The Institute for Physical Medicine and Rehabilitation, 1962.

The Physically Disabled and Their Environment. Report of a Conference in Stockholm, Sweden, October 12-18, 1961. New York: International Society for Rehabilitation of the Disabled.

Rehabilitation Literature, 1950-1955. Compiled by Graham, E. C., and Mullen, M. M. New York: Blakiston Division, McGraw-Hill Book Company, 1956.

Rehabilitation Literature—Monthly periodical. Chicago: National Society for Crippled Children and Adults. Subscription, \$4.50 per year.

NUTRITION

BOOKS

NORMAL NUTRITION

Bogert, L. J. *Nutrition and Physical Fitness*. Philadelphia: W. B. Saunders Company, 1960.

Burton, B. T., Editor. *The Heinz Handbook of Nutrition*. New York: Blakiston Division of McGraw-Hill Book Company, 1959.

Levertown, R. M. *Food Becomes You*. Ames, Iowa: Iowa State University Press, 1960.

Spock, B., MD, and Lowenberg, M. *Feeding Your Baby and Child*. New York: Pocket Books, Inc., 1957.

Stefferd, A. D., Editor. *Food, the Yearbook of Agriculture 1959*. The United States Department of Agriculture. Washington 25, D.C.: Superintendent of Documents, U.S. Government Printing Office.

NUTRITION AND DIET THERAPY

American Diabetes Association. A

Cookbook for Diabetics. New York 17: The Association, 1 East 45th St., Conrad, M. L. *Allergy Cooking*. New York: Thomas Y. Crowell, 1955.

Cooper, L. F., Barber, E. M., Mitchell, H. S., Rynbergen, H. J. *Nutrition In Health and Disease*. Philadelphia: J. B. Lippincott Company, 1958.

Gofman, J. W., and others. *Dietary Prevention and Treatment of Heart Disease*. New York: G. P. Putnam Sons, 1958.

Jolliffe, N., MD. *Reduce and Stay Reduced*. New York: Simon and Schuster, 1957.

Payne, A. S., and Callahan, D. *The Low Sodium, Fat-Controlled Cookbook*. Boston: Little Brown & Company, 1960.

Proudfit, F. T., and Robinson, C. H. *Nutrition and Diet Therapy*. New York: Macmillan Co., 1950.

Revell, D. *Cholesterol Control Cookery*. New York: Carlton Press, 1961.

BULLETINS, LEAFLETS, PAMPHLETS

U.S. Department of Agriculture*

Family Fare. Home and Garden Bulletin No. 1, 1955. 25 cents.

Food and Your Weight. Home and Garden Bulletin No. 74, 1960. 15 cents.

Nutrition—Up to Date, Up to You. Reprint from Home and Garden Bulletin No. 1, 1960. 15 cents.

U.S. Department of Health, Education, and Welfare*

Your Child from One to Six. Children's Bureau Publication No. 30, 1962. 20 cents.

Your Child from Six to Twelve. Children's Bureau Publication No. 324, 1949. 20 cents.

The Adolescent in Your Family. Children's Bureau Publication No. 347, 1955. 25 cents.

Food Facts vs Food Fallacies. Food and Drug Administration. FDA Leaflet No. 4. Revised Oct. 1962. Free.

Dietary Aspects of Cardiovascular Diseases, Selected References. Public Health Service Publication No. 755, 1960. 35 cents.

SPECIALIZED INFORMATION

James, G., Tompkins, M., and Heuberger, A. *Allergy Recipes.* Revised edition. Chicago: The American Dietetic Association, 1960.

Taking Care of Diabetes. Prepared by Committees of the American Dietetic Association and the American Diabetes Association in cooperation with the Diabetes Branch, U.S. Public Health Service.

SODIUM-RESTRICTED DIET BOOKLETS

Your 500-Milligram Sodium Diet

Your 1,000-Milligram Sodium Diet

Your Mild Sodium-Restricted Diet

Prepared by American Dietetic Association, American Heart Association, Council on Foods and Nutrition of the American Medical Association, Nutrition Foundation, and Public Health Service of the U.S. Department of Health, Education, and Welfare. 1958. Available from local Heart Associations or from the American Heart Association, New York, N.Y.

Your Cholesterol Depressant Diet Book. The Hunts Foods and Industries, Fullerton, California, 1961. Distributed only to physicians.

SCIENTIFIC JOURNALS

Journal of the American Dietetic Association. Published monthly by The American Dietetic Association, 620 N. Michigan Ave., Chicago 11, Illinois. \$8 per year.

American Journal of Clinical Nutrition. Published bimonthly. 466 Lexington Ave., New York 17, N.Y. \$8 per year.

Nutrition Reviews. Published by the Nutrition Foundation, 99 Park Ave., New York 16, N.Y. \$4.50 per year.

Forecast Magazine. A magazine for the lay diabetic published 6 times yearly, Edward Sanderson, Managing Editor, 1 East 45th St., New York 17, N.Y. \$2 per year.

REPRINTS

Reprints and publications, in wide variety, concerning nutrition are available from The American Dietetic Association, 620 N. Michigan Ave., Chicago 11, Illinois. Catalogue available on request.

Bez, E. M. The hospital dietitian in a rehabilitation program. *J. of the Am. Dietetic Assoc.* 35, No. 7 (July 1959), pp.710-711.

Bryce, T. E., OTR. Suggestions for teaching cooking to the cerebral palsied. *Cerebral Palsy Rev.* 23, No. 6

(Nov.-Dec. 1962), pp. 15-17.

Norman, K. D., Mas, M. T., and Forbes, C. E. Nutrition for handicapped homemakers. *J. Am. Dietetic Assoc.*, Nov. 1956 (Reprint).

Post, R. M. Rehabilitation in a tuberculosis hospital—teaching home management and food selection. *J. of the Am. Dietetic Assoc.* 32, No. 11 (Nov. 1956), pp. 1088-1090.

White, J. S. Patients cook their way back to health. *The Modern Hospital* 97, August 1961, pp. 112, 114, 117.

* Order government publications from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

DISPLAYS, EXHIBITS, POSTERS

National Dairy Council, 111 North Canal St., Chicago 6, Illinois:

Display: ZA 5—A Guide to Good Eating, second edition. Full color, photographic, size 18x28 inches. Price, 20 cents each; mounted with easel, \$1. Presents the four major food

groups as basis for a daily food guide. Statement of review by Council on Foods and Nutrition, American Medical Association.

Other displays available. Request current list.

FILMS, FILMSTRIPS, SLIDES

See general list following the bibliographies.

CATALOGUES AND LISTS

Approved Films on Food and Nutrition. Food and Nutrition Committee, Welfare and Health Council of New York City, 44 E. 23rd St., New York 13, N.Y.

Educational Guide to Free Films. Educators Progress Service, Randolph, Wisconsin.

Bibliography of Catalogs Listing Teaching Aids for Nutrition Education. Nutrition Foundation, Inc. 99 Park Avenue, New York 16, N.Y.

Family Life, Literature and Film. An Annotated Bibliography. Minnesota Council on Family Life, 1219 University Ave., S.E., Minneapolis, Minn.

Family Life References. A Selected Annotated Bibliography. Prepared by Cannon, K. L., Carter, D. C., Porter, B. M., and Dyer, D. T. 1961-62. Utah Council on Family Relations, Dept. of Family Living and Child Development, Utah State University, Logan, Utah (c/o C. Jay Skidmore).

List of Films on Family Relations and Child Development. Revised 1960. Annotated bibliography including sources. Prepared by Morgan, M. I., Goodson, N. M., and Dales, R. J. American Home Economics Association, 1600 Twentieth Street, N.W., Washington 9, D.C.

SOURCES

Coronet Instructional Films, 65 East South Water St., Chicago 1, Illinois.
Filmstrips, Inc., 66 West 87th Street, New York, N.Y.

International Society for the Rehabilitation of the Disabled, 701 First Avenue, New York 17, N.Y.

Local Utility Companies

Modern Talking Picture Service, 3 East 54th St., New York 22, N.Y., and in other major cities

Social Science Films, Inc., 2395 Hampton Avenue, St. Louis 10, Missouri

State Universities Audio-Visual Departments.

FILMS

Audio-Visual Center, University of Connecticut, Storrs, Conn.:

An Approach to Work Simplification for Handicapped Homemakers. 16 mm. sound color, 18 mins. This film presents an organized procedure for finding ways to simplify homemaking tasks.

Principles of Motion Economy Illustrated by Handicapped Homemakers. 16 mm. sound color, 18 mins. In this film, physically handicapped women illustrate the 16 principles of motion economy most commonly used in homemaking tasks.

Work Simplification Demonstrated by a One-Handed Mother in Bathing a Baby. 16 mm. sound color, 12 mins. The application of 14 principles of work simplification to a specific job and a specific disability.

Work Simplification Demonstrated by a Wheelchair Mother in Preparing a Formula. 16 mm. sound color, 12 mins. The application of 14 principles of work simplification to a specific job and a specific disability.

Audio-Visual Center, University of Illinois, Urbana, Ill.:

Wheelchair Kitchen. 16 mm. sound B/W, 4½ mins. Depicts essential considerations for effective arrangement of facilities for a wheelchair homemaker.

Film Production Unit, Alice Norton House, Iowa State University, Ames, Iowa:

Yarn About a Kitchen. 16 mm. sound color, 23 mins. How a farm family remodeled its kitchen and rearranged equipment and storage space to reduce kitchen fatigue. 1955.

International Society for the Rehabilitation of the Disabled, 701 First Avenue, New York 17, N.Y.:

Handicapped Housewife. 16 mm. B/W sound, 16 mins. Shows different

methods and technical aids useful to a Swedish housewife with one arm.

Modern Talking Picture Series, 3 East 54th St., New York 22, N.Y.:

Admirals in The Making. 16 mm. sound color, 13½ mins. Producer: National Dairy Council, Chicago. Free for high school, college, and adult groups. Vivid picture of life at the Naval Academy at Annapolis helps people see the importance of good health habits; has wide appeal. (Nutrition)

Social Science Films Inc., 2395 Hampton Ave., St. Louis 9, Missouri:

More Food For Your Money. 16 mm. sound color, 12 mins. Producer and distributor: Social Science Films, Inc. Shows how to divide the food dollar to assure balance in food supply and to take advantage of frozen and packaged foods. 1955. Small rental fee.

Visual Auditory Production Center, Wayne State University, Detroit 1, Michigan:

Take It Easy. 16 mm. sound color, 21 mins. A cardiac homemaker demonstrates ways to make housekeeping tasks simpler. 1953. (Available from American Heart Associations)

FILMSTRIPS

U.S. Department of Agriculture,

Washington 25, D.C. (Order from Photo Lab, Inc., 3825 Georgia Ave., N.W., Washington 11, D.C.)

Beltsville Energy Saving Kitchen Workroom. 35 frames. Filmstrip C-58. Produced by the then Institute of Home Economics, Agricultural Research Service. 1927.

Food for Fitness. Color, 24 frames. Filmstrip C-68. Gives the Basic 4 daily food guide plan. Examples of suggested food are shown, and typical meals are illustrated. 1958.

Step by Step in Every Day Tasks. 60 frames, B/W. Slide Film 643. Produced by Extension Service. 1944.

SLIDES

Consumers Power Co., Jackson, Michigan:

Easy Does It. 33 slides of a demonstration kitchen designed to save time and energy.

Handicapped Homemaker Research Center, School of Home Economics, University of Connecticut, Storrs:

You Can Do Family Laundry With Hand Limitations. 25 slides.

Principles of Work Simplification Illustrated by Baby Bathing with Hand Limitations. 15 slides.

A Wheelchair Mother Prepares Baby's Formula. 19 slides.

Addresses for Material in Reference Lists and Bibliographies

The addresses in the following list include those of agencies mentioned several times and those that may not be readily available. Where only a single reference was used from a particular source, the address is included with the reference in the reference list or bibliography. Locations of colleges and universities are not given because they are easily available; for periodicals, consult *N. W. Ayer and Son's Directory of Newspapers and Periodicals*; for addresses of book publishers, consult the *Cumulative Book Index* or other reference.

American Diabetes Association, 1 East 45th St., New York 17, N.Y.

American Dietetic Association, 620 North Michigan Ave., Chicago 11, Ill.

American Heart Association, 44 East 23rd St., New York 10, N.Y.

American Home Economics Association, 1600 20th St., N.W., Washington 9, D.C.

American Institute of Architects, 1735 New York Avenue, N.W., Washington 6, D.C.

American Medical Association, 535 North Dearborn St., Chicago 10, Ill.

American Nurses Association, 10 Columbus Circle, New York 19, N.Y.

American Occupational Therapy Association, 250 West 57th St., New York 19, N.Y.

American Physical Therapy Association, 1790 Broadway, New York 19, N.Y.

American Standards Association, 10 East 40th St., New York 16, N.Y.

The Arthritis and Rheumatism Foundation, 10 Columbus Circle, New York 19, N.Y.

Child Study Association of America, Inc., 9 East 89th St., New York 28, N.Y.

Clothing and Research Development Foundation, Inc., 48 East 66th St., New York 21, N.Y.

The Danish National Association for Infantile Paralysis, Hellerup, Denmark.

Family Service Association of America, 215 Park Avenue South, New York 3, N.Y.

Federal Housing Administration, Housing and Home Finance Agency, Washington 25, D.C.

Folksam Insurance Co., Stockholm, Sweden.

The Hogg Foundation for Mental Health, University of Texas, Austin 12, Texas

Housing and Home Finance Agency, Washington 25, D.C.

Institute of Physical Medicine and Rehabilitation, N.Y. University Bellevue Medical Center, 400 East 34th St., New York 16, N.Y.

International Society for Rehabilitation of the Disabled, 701 First Ave., New York 17, N.Y.

Invalidsaatio, Tenholantie 10, Helsinki, Finland

King's College Hospital, London, S.E. 5, England

Ministry of Housing and Local Government, Her Majesty's Stationery Office, London, England

The National Council on the Aging, 345 East 46th St., New York 17, N.Y.

National Dairy Council, 111 N. Canal St., Chicago 6, Ill.

National Institute for Consumer Information, Stockholm, Sweden

National Safety Council, 425 North Michigan Ave., Chicago 11, Ill.

National Society for Crippled Children and Adults, 2023 West Ogden Ave., Chicago 12, Illinois

National Tuberculosis Association, 1790 Broadway, New York 19, N.Y.

Paralyzed Veterans of America, Inc., 7521 Roslyn St., Swissvale 18, Penn.

President's Committee on Employment of the Physically Handicapped, Washington 25, D.C.

Public Affairs Pamphlets, 22 East 38th St., New York 16, N.Y.

Public Housing Administration, Housing and Home Finance Agency, Washington 25, D.C.

Rehabilitation Home Economist, Regina Physical Restoration Center, Saskatchewan, Canada

Scottish Housing Advisory Committee, Her Majesty's Stationery Office, Edinburgh, Scotland

Small Homes Council, University of Illinois, Urbana, Ill.

Social Security Administration, U.S. Dept. of Health, Education, and Welfare, Washington 25, D.C.

Swedish Central Committee for the Care of Cripples, Bromma, Sweden

United Cerebral Palsy Associations, 321 West 44th St., New York 36, N.Y.

U.S. Department of Agriculture, Washington 25, D.C.

Agricultural Marketing Service
Cultural and Home Economics Research

U.S. Department of Health, Education, and Welfare, Washington 25, D.C.

Veterans Administration, Washington 25, D.C.

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